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(54) Title: RNA INTERFERENCE MEDIATED INHIBITION OF GENE EXPRESSION USING SHORT INTERFERING NU-CLEIC ACID (SINA)

(57) Abstract: This invention relates to compounds, compositions, and methods useful for modulating gene expression using short interfering nucleic acid (siNA) molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of genes, such as expressed pseudogenes associated with the maintenance or development of diseases, disorders, traits, and conditions in a subject or organism.

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# RNA INTERFERENCE MEDIATED INHIBITION OF GENE EXPRESSION USING SHORT INTERFERING NUCLEIC ACID (siNA)

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This application is a continuation-in-part of International Patent Application No. PCT/US04/16390, filed May 24, 2004, which is a continuation-in-part of U.S. Patent Application No. 10/826,966, filed April 16, 2004, which is continuation-in-part of U.S. Patent Application No. 10/757,803, filed January 14, 2004, which is a continuation-inpart of U.S. Patent Application No. 10/720,448, filed November 24, 2003, which is a continuation-in-part of U.S. Patent Application No. 10/693,059, filed October 23, 2003, which is a continuation-in-part of U.S. Patent Application No. 10/444,853, filed May 23. 2003, which is a continuation-in-part of International Patent Application No. 10 PCT/US03/05346, filed February 20, 2003, and a continuation-in-part of International Patent Application No. PCT/US03/05028, filed February 20, 2003, both of which claim the benefit of U.S. Provisional Application No. 60/358,580 filed February 20, 2002, U.S. Provisional Application No. 60/363,124 filed March 11, 2002, U.S. Provisional 15 Application No. 60/386,782 filed June 6, 2002, U.S. Provisional Application No. 60/406,784 filed August 29, 2002, U.S. Provisional Application No. 60/408,378 filed September 5, 2002, U.S. Provisional Application No. 60/409,293 filed September 9, 2002, and U.S. Provisional Application No. 60/440,129 filed January 15, 2003. This application is also a continuation-in-part of International Patent Application No. 20 PCT/US04/13456, filed April 30, 2004, which is a continuation-in-part of U.S. Patent Application No. 10/780,447, filed February 13, 2004, which is a continuation-in-part of U.S. Patent Application No. 10/427,160, filed April 30, 2003, which is a continuation-inpart of International Patent Application No. PCT/US02/15876 filed May 17, 2002, which claims the benefit of U.S. Provisional Application No. 60/292,217, filed May 18, 2001, 25 U.S. Provisional Application No. 60/362,016, filed March 6, 2002, U.S. Provisional Application No. 60/306,883, filed July 20, 2001, and U.S. Provisional Application No. 60/311,865, filed August 13, 2001. This application is also a continuation-in-part of U.S. Patent Application No. 10/727,780 filed December 3, 2003. This application also claims the benefit of U.S. Provisional Application No. 60/543,480, filed February 10, 2004. 30 The instant application claims the benefit of all the listed applications, which are hereby incorporated by reference herein in their entireties, including the drawings.

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# Field Of The Invention

The present invention relates to compounds, compositions, and methods for the study, diagnosis, and treatment of traits, diseases and conditions that respond to the modulation of tartget gene expression and/or activity. The present invention is also directed to compounds, compositions, and methods relating to traits, diseases and conditions that respond to the modulation of expression and/or activity of genes involved in gene expression pathways or other cellular processes that mediate the maintenance or development of such traits, diseases and conditions. Specifically, the invention relates to small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules capable of mediating RNA interference (RNAi) against target gene expression. Such small nucleic acid molecules are useful, for example, in providing compositions for treatment of traits, diseases and conditions that can respond to modulation of gene expression in a subject or organism.

# Background Of The Invention

The following is a discussion of relevant art pertaining to RNAi. The discussion is provided only for understanding of the invention that follows. The summary is not an admission that any of the work described below is prior art to the claimed invention.

RNA interference refers to the process of sequence-specific post-transcriptional gene silencing in animals mediated by short interfering RNAs (siRNAs) (Zamore et al., 2000, Cell, 101, 25-33; Fire et al., 1998, Nature, 391, 806; Hamilton et al., 1999, Science, 286, 950-951; Lin et al., 1999, Nature, 402, 128-129; Sharp, 1999, Genes & Dev., 13:139-141; and Strauss, 1999, Science, 286, 886). The corresponding process in plants (Heifetz et al., International PCT Publication No. WO 99/61631) is commonly referred to as post-transcriptional gene silencing or RNA silencing and is also referred to as quelling in fungi. The process of post-transcriptional gene silencing is thought to be an evolutionarily-conserved cellular defense mechanism used to prevent the expression of foreign genes and is commonly shared by diverse flora and phyla (Fire et al., 1999, Trends Genet., 15, 358). Such protection from foreign gene expression may have evolved in response to the production of double-stranded RNAs (dsRNAs) derived from

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viral infection or from the random integration of transposon elements into a host genome via a cellular response that specifically destroys homologous single-stranded RNA or viral genomic RNA. The presence of dsRNA in cells triggers the RNAi response through a mechanism that has yet to be fully characterized. This mechanism appears to be different from other known mechanisms involving double stranded RNA-specific ribonucleases, such as the interferon response that results from dsRNA-mediated activation of protein kinase PKR and 2',5'-oligoadenylate synthetase resulting in nonspecific cleavage of mRNA by ribonuclease L (see for example US Patent Nos. 6,107,094; 5,898,031; Clemens et al., 1997, J. Interferon & Cytokine Res., 17, 503-524; Adah et al., 2001, Curr. Med. Chem., 8, 1189).

The presence of long dsRNAs in cells stimulates the activity of a ribonuclease III enzyme referred to as dicer (Bass, 2000, Cell, 101, 235; Zamore et al., 2000, Cell, 101, 25-33; Hammond et al., 2000, Nature, 404, 293). Dicer is involved in the processing of the dsRNA into short pieces of dsRNA known as short interfering RNAs (siRNAs) 15 (Zamore et al., 2000, Cell, 101, 25-33; Bass, 2000, Cell, 101, 235; Berstein et al., 2001, Nature, 409, 363). Short interfering RNAs derived from dicer activity are typically about 21 to about 23 nucleotides in length and comprise about 19 base pair duplexes (Zamore et al., 2000, Cell, 101, 25-33; Elbashir et al., 2001, Genes Dev., 15, 188). Dicer has also been implicated in the excision of 21- and 22-nucleotide small temporal RNAs (stRNAs) from precursor RNA of conserved structure that are implicated in translational control (Hutvagner et al., 2001, Science, 293, 834). The RNAi response also features an endonuclease complex, commonly referred to as an RNA-induced silencing complex (RISC), which mediates cleavage of single-stranded RNA having sequence complementary to the antisense strand of the siRNA duplex. Cleavage of the target RNA takes place in the middle of the region complementary to the antisense strand of the siRNA duplex (Elbashir et al., 2001, Genes Dev., 15, 188).

RNAi has been studied in a variety of systems. Fire et al., 1998, Nature, 391, 806, were the first to observe RNAi in C. elegans. Bahramian and Zarbl, 1999, Molecular and Cellular Biology, 19, 274-283 and Wianny and Goetz, 1999, Nature Cell Biol., 2, 70, describe RNAi mediated by dsRNA in mammalian systems. Hammond et al., 2000, Nature, 404, 293, describe RNAi in Drosophila cells transfected with dsRNA. Elbashir WO 2005/044981 PCT/US2004/027403

et al., 2001, Nature, 411, 494 and Tuschl et al., International PCT Publication No. WU 01/75164, describe RNAi induced by introduction of duplexes of synthetic 21-nucleotide RNAs in cultured mammalian cells including human embryonic kidney and HeLa cells. Recent work in Drosophila embryonic lysates (Elbashir et al., 2001, EMBO J., 20, 6877 and Tuschl et al., International PCT Publication No. WO 01/75164) has revealed certain requirements for siRNA length, structure, chemical composition, and sequence that are essential to mediate efficient RNAi activity. These studies have shown that 21nucleotide siRNA duplexes are most active when containing 3'-terminal dinucleotide overhangs. Furthermore, complete substitution of one or both siRNA strands with 2'deoxy (2'-H) or 2'-O-methyl nucleotides abolishes RNAi activity, whereas substitution of the 3'-terminal siRNA overhang nucleotides with 2'-deoxy nucleotides (2'-H) was shown to be tolerated. Single mismatch sequences in the center of the siRNA duplex were also shown to abolish RNAi activity. In addition, these studies also indicate that the position of the cleavage site in the target RNA is defined by the 5'-end of the siRNA guide sequence rather than the 3'-end of the guide sequence (Elbashir et al., 2001, EMBO J., 15 20, 6877). Other studies have indicated that a 5'-phosphate on the target-complementary strand of a siRNA duplex is required for siRNA activity and that ATP is utilized to maintain the 5'-phosphate moiety on the siRNA (Nykanen et al., 2001, Cell, 107, 309).

Studies have shown that replacing the 3'-terminal nucleotide overhanging segments of a 21-mer siRNA duplex having two-nucleotide 3'-overhangs with 20 deoxyribonucleotides does not have an adverse effect on RNAi activity. Replacing up to four nucleotides on each end of the siRNA with deoxyribonucleotides has been reported to be well tolerated, whereas complete substitution with deoxyribonucleotides results in no RNAi activity (Elbashir et al., 2001, EMBO J., 20, 6877 and Tuschl et al., International PCT Publication No. WO 01/75164). In addition, Elbashir et al., supra, 25 also report that substitution of siRNA with 2'-O-methyl nucleotides completely abolishes RNAi activity. Li et al., International PCT Publication No. WO 00/44914, and Beach et al., International PCT Publication No. WO 01/68836 preliminarily suggest that siRNA may include modifications to either the phosphate-sugar backbone or the nucleoside to include at least one of a nitrogen or sulfur heteroatom, however, neither application 30 postulates to what extent such modifications would be tolerated in siRNA molecules, nor provides any further guidance or examples of such modified siRNA. Kreutzer et al.,

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Canadian Patent Application No. 2,359,180, also describe certain chemical modifications for use in dsRNA constructs in order to counteract activation of double-stranded RNA-dependent protein kinase PKR, specifically 2'-amino or 2'-O-methyl nucleotides, and nucleotides containing a 2'-O or 4'-C methylene bridge. However, Kreutzer et al. similarly fails to provide examples or guidance as to what extent these modifications would be tolerated in dsRNA molecules.

Parrish et al., 2000, Molecular Cell, 6, 1077-1087, tested certain chemical modifications targeting the unc-22 gene in C. elegans using long (>25 nt) siRNA transcripts. The authors describe the introduction of thiophosphate residues into these siRNA transcripts by incorporating thiophosphate nucleotide analogs with T7 and T3 RNA polymerase and observed that RNAs with two phosphorothioate modified bases also had substantial decreases in effectiveness as RNAi. Further, Parrish et al. reported that phosphorothicate modification of more than two residues greatly destabilized the RNAs in vitro such that interference activities could not be assayed. Id. at 1081. The authors also tested certain modifications at the 2'-position of the nucleotide sugar in the long siRNA transcripts and found that substituting deoxynucleotides for ribonucleotides produced a substantial decrease in interference activity, especially in the case of Uridine to Thymidine and/or Cytidine to deoxy-Cytidine substitutions. Id. In addition, the authors tested certain base modifications, including substituting, in sense and antisense strands of the siRNA, 4-thiouracil, 5-bromouracil, 5-iodouracil, and 3-(aminoallyl)uracil for uracil, and inosine for guanosine. Whereas 4-thiouracil and 5-bromouracil substitution appeared to be tolerated, Parrish reported that inosine produced a substantial decrease in interference activity when incorporated in either strand. Parrish also reported that incorporation of 5-iodouracil and 3-(aminoallyl)uracil in the antisense strand resulted in a substantial decrease in RNAi activity as well.

The use of longer dsRNA has been described. For example, Beach et al., International PCT Publication No. WO 01/68836, describes specific methods for attenuating gene expression using endogenously-derived dsRNA. Tuschl et al., International PCT Publication No. WO 01/75164, describe a Drosophila in vitro RNAi system and the use of specific siRNA molecules for certain functional genomic and certain therapeutic applications; although Tuschl, 2001, Chem. Biochem., 2, 239-245,

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doubts that RNA1 can be used to cure genetic diseases or viral infection due to the danger of activating interferon response. Li et al., International PCT Publication No. WO 00/44914, describe the use of specific long (141 bp-488 bp) enzymatically synthesized or vector expressed dsRNAs for attenuating the expression of certain target genes. 5 Zernicka-Goetz et al., International PCT Publication No. WO 01/36646, describe certain methods for inhibiting the expression of particular genes in mammalian cells using certain long (550 bp-714 bp), enzymatically synthesized or vector expressed dsRNA molecules. Fire et al., International PCT Publication No. WO 99/32619, describe particular methods for introducing certain long dsRNA molecules into cells for use in inhibiting gene expression in nematodes. Plaetinck et al., International PCT Publication No. WO 00/01846, describe certain methods for identifying specific genes responsible for conferring a particular phenotype in a cell using specific long dsRNA molecules. Mello et al., International PCT Publication No. WO 01/29058, describe the identification of specific genes involved in dsRNA-mediated RNAi. Pachuck et al., International PCT Publication No. WO 00/63364, describe certain long (at least 200 nucleotide) dsRNA constructs, Deschamps Depaillette et al., International PCT Publication No. WO 99/07409, describe specific compositions consisting of particular dsRNA molecules combined with certain anti-viral agents. Waterhouse et al., International PCT Publication No. 99/53050 and 1998, PNAS, 95, 13959-13964, describe certain methods for decreasing the phenotypic expression of a nucleic acid in plant cells using certain dsRNAs. Driscoll et al., International PCT Publication No. WO 01/49844, describe specific DNA expression constructs for use in facilitating gene silencing in targeted organisms.

Others have reported on various RNAi and gene-silencing systems. For example, Parrish et al., 2000, Molecular Cell, 6, 1077-1087, describe specific chemically-modified dsRNA constructs targeting the unc-22 gene of C. elegans. Grossniklaus, International PCT Publication No. WO 01/38551, describes certain methods for regulating polycomb gene expression in plants using certain dsRNAs. Churikov et al., International PCT Publication No. WO 01/42443, describe certain methods for modifying genetic 30 characteristics of an organism using certain dsRNAs. Cogoni et al., International PCT Publication No. WO 01/53475, describe certain methods for isolating a Neurospora silencing gene and uses thereof. Reed et al., International PCT Publication No. WO

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01/68836, describe certain methods for gene silencing in plants. Honer et al., International PCT Publication No. WO 01/70944, describe certain methods of drug screening using transgenic nematodes as Parkinson's Disease models using certain dsRNAs. Deak et al., International PCT Publication No. WO 01/72774, describe certain Drosophila-derived gene products that may be related to RNAi in Drosophila. Arndt et al., International PCT Publication No. WO 01/92513 describe certain methods for mediating gene suppression by using factors that enhance RNAi. Tuschl et al., International PCT Publication No. WO 02/44321, describe certain synthetic siRNA constructs. Pachuk et al., International PCT Publication No. WO 00/63364, and Satishchandran et al., International PCT Publication No. WO 01/04313, describe certain 10 methods and compositions for inhibiting the function of certain polynucleotide sequences using certain long (over 250 bp), vector expressed dsRNAs. Echeverri et al., International PCT Publication No. WO 02/38805, describe certain C. elegans genes identified via RNAi. Kreutzer et al., International PCT Publications Nos. WO 02/055692, WO 02/055693, and EP 1144623 B1 describes certain methods for inhibiting 15 gene expression using dsRNA. Graham et al., International PCT Publications Nos. WO 99/49029 and WO 01/70949, and AU 4037501 describe certain vector expressed siRNA molecules. Fire et al., US 6,506,559, describe certain methods for inhibiting gene expression in vitro using certain long dsRNA (299 bp-1033 bp) constructs that mediate RNAi. Martinez et al., 2002, Cell, 110, 563-574, describe certain single stranded siRNA 20 constructs, including certain 5'-phosphorylated single stranded siRNAs that mediate RNA interference in Hela cells. Harborth et al., 2003, Antisense & Nucleic Acid Drug Development, 13, 83-105, describe certain chemically and structurally modified siRNA molecules. Chiu and Rana, 2003, RNA, 9, 1034-1048, describe certain chemically and structurally modified siRNA molecules. Woolf et al., International PCT Publication 25 Nos. WO 03/064626 and WO 03/064625 describe certain chemically modified dsRNA constructs.

# SUMMARY OF THE INVENTION

This invention relates to compounds, compositions, and methods useful for modulating gene expression using short interfering nucleic acid (siNA) molecules. This invention also relates to compounds, compositions, and methods useful for modulating

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the expression and activity of other genes involved in pathways of gene expression and/or activity by RNA interference (RNAi) using small nucleic acid molecules. In particular, the instant invention features small nucleic acid molecules, such as short interfering nucleic acid (siNA), short interfering RNA (siRNA), double-stranded RNA 5 (dsRNA), micro-RNA (miRNA), and short hairpin RNA (shRNA) molecules and methods used to modulate the expression of genes, including gene targets having RNA transcripts referred to by Genbank Accession Numbers shown in Table I.

A siNA of the invention can be unmodified or chemically-modified. A siNA of the instant invention can be chemically synthesized, expressed from a vector or enzymatically synthesized. The instant invention also features various chemically-modified synthetic short interfering nucleic acid (siNA) molecules capable of modulating target gene expression or activity in cells by RNA interference (RNAi). The use of chemically-modified siNA improves various properties of native siNA molecules through increased resistance to nuclease degradation in vivo and/or through improved cellular uptake. Further, contrary to earlier published studies, siNA having multiple chemical modifications retains its RNAi activity. The siNA molecules of the instant invention provide useful reagents and methods for a variety of therapeutic, veterinary, diagnostic, target validation, genomic discovery, genetic engineering, and nharmacogenomic applications.

In one embodiment, the invention features one or more siNA molecules and methods that independently or in combination modulate the expression of target genes encoding proteins, such as proteins that are associated with the maintenance and/or development of diseases, traits, disorders, and/or conditions as described herein or otherwise known in the art, such as genes encoding sequences comprising those sequences referred to by GenBank Accession Nos. shown in Table I, referred to herein generally as "target". The description below of the various aspects and embodiments of the invention is provided with reference to exemplary target genes referred to herein as gene targets. However, the various aspects and embodiments are also directed to other genes, such as gene homologs, transcript variants, and polymorphisms (e.g., single nucleotide polymorphism, (SNPs)) associated with certain genes. As such, the various aspects and embodiments are also directed to other genes that are involved in disease,

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trait, condition, or disorder related pathways of signal transduction or gene expression that are involved, for example, in the maintenence or development of diseases, traits, conditions, or disorders described herein. These additional genes can be analyzed for target sites using the methods described for exemplary genes herein. Thus, the modulation of other genes and the effects of such modulation of the other genes can be performed, determined, and measured as described herein.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, wherein said siNA molecule comprises about 15 to about 28 base pairs.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that directs cleavage of a target RNA via RNA interference (RNAi), wherein the double stranded siNA molecule comprises a first and a second strand, each strand of the siNA molecule is about 18 to about 28 nucleotides in length, the first strand of the siNA molecule comprises nucleotide sequence having sufficient complementarity to the target RNA for the siNA molecule to direct cleavage of the target RNA via RNA interference, and the second strand of said siNA molecule comprises nucleotide sequence that is complementary to the first strand.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that directs cleavage of a target RNA via RNA interference (RNAi), wherein the double stranded siNA molecule comprises a first and a second strand, each strand of the siNA molecule is about 18 to about 23 nucleotides in length, the first strand of the siNA molecule comprises nucleotide sequence having sufficient complementarity to the target RNA for the siNA molecule to direct cleavage of the target RNA via RNA interference, and the second strand of said siNA molecule comprises 25 nucleotide sequence that is complementary to the first strand.

In one embodiment, the invention features a chemically synthesized double stranded short interfering nucleic acid (siNA) molecule that directs cleavage of a target RNA via RNA interference (RNAi), wherein each strand of the siNA molecule is about 18 to about 28 nucleotides in length; and one strand of the siNA molecule comprises

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nucleotide sequence having sufficient complementarity to the target RNA for the siNA molecule to direct cleavage of the target RNA via RNA interference.

In one embodiment, the invention features a chemically synthesized double stranded short interfering nucleic acid (siNA) molecule that directs cleavage of a target 5 RNA via RNA interference (RNAi), wherein each strand of the siNA molecule is about 18 to about 23 nucleotides in length; and one strand of the siNA molecule comprises nucleotide sequence having sufficient complementarity to the target RNA for the siNA molecule to direct cleavage of the target RNA via RNA interference.

In one embodiment, the invention features a siNA molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, for example, wherein the gene comprises protein encoding sequence. In one embodiment, the invention features a siNA molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, for example, wherein the gene comprises non-coding sequence or encodes sequence of regulatory elements involved in gene expression (e.g., non-coding RNA).

In one embodiment, a siNA of the invention is used to inhibit the expression of target genes or a target gene family, wherein the genes or gene family sequences share sequence homology. Such homologous sequences can be identified as is known in the art, for example using sequence alignments. siNA molecules can be designed to target such homologous sequences, for example using perfectly complementary sequences or by incorporating non-canonical base pairs, for example mismatches and/or wobble base pairs, that can provide additional target sequences. In instances where mismatches are identified, non-canonical base pairs (for example, mismatches and/or wobble bases) can be used to generate siNA molecules that target more than one gene sequence. In a nonlimiting example, non-canonical base pairs such as UU and CC base pairs are used to generate siNA molecules that are capable of targeting sequences for differing targets that share sequence homology. As such, one advantage of using siNAs of the invention is that a single siNA can be designed to include nucleic acid sequence that is complementary to the nucleotide sequence that is conserved between the homologous genes. In this approach, a single siNA can be used to inhibit expression of more than one gene instead of using more than one siNA molecule to target the different genes.

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In one embodiment, a target RNA of the invention is an expressed pseudogene (see for example pseudogene sequences referred to by Genbank Accession Numbers in Table I). As used herein the term "disease related expressed pseudogene" refers to any expressed pseudogene that is associated with a disease, disorder, condition, or trait.

In one embodiment, the invention features a siNA molecule having RNAi activity against target RNA (e.g., coding or non-coding RNA), wherein the siNA molecule comprises a sequence complementary to any RNA sequence, such as those sequences having GenBank Accession Nos. shown in Table I. In another embodiment, the invention features a siNA molecule having RNAi activity against target RNA, wherein the siNA molecule comprises a sequence complementary to an RNA having variant encoding sequence, for example other mutant genes not shown in Table I but known in the art to be associated with the maintenance and/or development of diseases, traits, disorders, and/or conditions described herein or otherwise known in the art. Chemical modifications as shown in Table II or otherwise described herein can be applied to any siNA construct of the invention. In another embodiment, a siNA molecule of the invention includes a nucleotide sequence that can interact with nucleotide sequence of a target gene and thereby mediate silencing of gene expression, for example, wherein the siNA mediates regulation of gene expression by cellular processes that modulate the chromatin structure or methylation patterns of the gene and prevent transcription of the gene.

In one embodiment, siNA molecules of the invention are used to down regulate or inhibit the expression of proteins arising from haplotype polymorphisms that are associated with a disease or condition. Analysis of genes, or protein or RNA levels can be used to identify subjects with such polymorphisms or those subjects who are at risk of developing traits, conditions, or diseases described herein. These subjects are amenable to treatment, for example, treatment with siNA molecules of the invention and any other composition useful in treating diseases related to gene expression. As such, analysis of protein or RNA levels can be used to determine treatment type and the course of therapy in treating a subject. Monitoring of protein or RNA levels can be used to predict treatment outcome and to determine the efficacy of compounds and compositions that

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modulate the level and/or activity of certain proteins associated with a trait, disorder, condition, or disease.

In one embodiment of the invention a siNA molecule comprises an antisense strand comprising a nucleotide sequence that is complementary to a target polynucleotide sequence or a portion thereof. The siNA further comprises a sense strand, wherein said sense strand comprises a nucleotide sequence of a target polynucleotide sequence or a portion thereof, (e.g., about 15 to about 25 or more, or about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 or more contiguous nucleotides in a target polynucleotide sequence). In one embodiment, the target polynucleotide sequence is a target DNA. In one embodiment, the target polynucleotide sequence is a target RNA.

In one embodiment, the invention features a siNA molecule comprising a first sequence, for example, the antisense sequence of the siNA construct, complementary to a sequence or portion of sequence comprising sequence represented by GenBank Accession Nos. shown in Table I, and a second sequence, for example a sense sequence, that is complementary to the antisense sequence. Chemical modifications in Table II and described herein can be applied to any siNA construct (e.g., sense or antisenase sequence) of the invention.

In one embodiment of the invention a siNA molecule comprises an antisense strand having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, wherein the antisense strand is complementary to a target RNA sequence or a portion thereof, and wherein said siNA further comprises a sense strand having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, and wherein said sense strand and said antisense strand are distinct nucleotide sequences where at least about 15 nucleotides in each strand are complementary to the other strand.

In another embodiment of the invention a siNA molecule of the invention comprises an antisense region having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, wherein the antisense region is complementary to a target DNA sequence, and wherein said siNA further comprises a sense region having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23,

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27, 23, 20, 21, 20, 27, or 30) nucleotides, wherein said sense region and said antisense region are comprised in a linear molecule where the sense region comprises at least about 15 nucleotides that are complementary to the antisense region.

In one embodiment, a siNA molecule of the invention has RNAi activity that modulates expression of RNA encoded by one or more genes. Because various genes can share some degree of sequence homology with each other, siNA molecules can be designed to target a class of genes or alternately specific genes (e.g., polymorphic variants) by selecting sequences that are either shared amongst different gene targets or alternatively that are unique for a specific gene target. Therefore, in one embodiment, the siNA molecule can be designed to target conserved regions of target RNA sequences having homology among several gene variants so as to target a class of genes with one siNA molecule. Accordingly, in one embodiment, the siNA molecule of the invention modulates the expression of one or both gene alleles in a subject. In another embodiment, the siNA molecule can be designed to target a sequence that is unique to a specific target RNA sequence (e.g., a single allele or single nucleotide polymorphism (SNP)) due to the high degree of specificity that the siNA molecule requires to mediate RNAi activity.

In one embodiment, nucleic acid molecules of the invention that act as mediators of the RNA interference gene silencing response are double-stranded nucleic acid molecules. In another embodiment, the siNA molecules of the invention consist of duplex nucleic acid molecules containing about 15 to about 30 base pairs between oligonucleotides comprising about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides. In yet another embodiment, siNA molecules of the invention comprise duplex nucleic acid molecules with overhanging ends of about 1 to about 3 (e.g., about 1, 2, or 3) nucleotides, for example, about 21-nucleotide duplexes with about 19 base pairs and 3'-terminal mononucleotide, dinucleotide, or trinucleotide overhangs. In yet another embodiment, siNA molecules of the invention comprise duplex nucleic acid molecules with blunt ends, where both ends are blunt, or alternatively, where one of the ends is blunt.

In one embodiment, the invention features one or more chemically-modified  $siN\Lambda$  constructs having specificity for a target polynucleotide (e.g., RNA or DNA), such as

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DAYA encoding KINA sequences referred to herein by Genbank Accession number or such RNA sequences referred to herein by Genbank Accession number. In one embodiment, the invention features a RNA based siNA molecule (e.g., a siNA comprising 2'-OH nucleotides) having specificity for target polynucleotides (e.g., RNA or DNA) that includes one or more chemical modifications described herein. Nonlimiting examples of such chemical modifications include without limitation phosphorothioate internucleotide linkages, 2'-deoxyribonucleotides, 2'-O-methyl ribonucleotides, 2'-deoxy-2'-fluoro ribonucleotides, "universal base" nucleotides, "acyclic" nucleotides, 5-C-methyl nucleotides, and terminal glyceryl and/or inverted deoxy abasic residue incorporation. These chemical modifications, when used in various siNA constructs, (e.g., RNA based siNA constructs), are shown to preserve RNAi activity in cells while at the same time, dramatically increasing the serum stability of these compounds. Furthermore, contrary to the data published by Parrish et al., supra, applicant demonstrates that multiple (greater than one) phosphorothicate substitutions are well-tolerated and confer substantial increases in serum stability for modified siNA constructs.

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In one embodiment, a siNA molecule of the invention comprises modified nucleotides while maintaining the ability to mediate RNAi. The modified nucleotides can be used to improve in vitro or in vivo characteristics such as stability, activity, and/or bioavailability. For example, a siNA molecule of the invention can comprise modified nucleotides as a percentage of the total number of nucleotides present in the siNA molecule. As such, a siNA molecule of the invention can generally comprise about 5% to about 100% modified nucleotides (e.g., about 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95% or 100% modified nucleotides). The actual percentage of modified nucleotides present in a given siNA molecule will depend on the total number of nucleotides present in the siNA. If the siNA molecule is single stranded, the percent modification can be based upon the total number of nucleotides present in the single stranded siNA molecules. Likewise, if the siNA molecule is double stranded, the percent modification can be based upon the total number of nucleotides present in the sense strand, antisense strand, or both the sense and antisense strands.

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One aspect of the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA. In one embodiment, the double stranded siNA molecule comprises one or more chemical modifications and each strand of the double-stranded siNA is about 21 nucleotides long. In one embodiment, the double-stranded siNA molecule does not contain any ribonucleotides. In another embodiment, the doublestranded siNA molecule comprises one or more ribonucleotides. In one embodiment, each strand of the double-stranded siNA molecule independently comprises about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, wherein each strand comprises about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides that are complementary to the nucleotides of the other strand. In one embodiment, one of the strands of the double-stranded siNA molecule comprises a nucleotide sequence that is complementary to a nucleotide sequence or a portion thereof of the gene, and the second strand of the double-stranded siNA molecule comprises a nucleotide sequence substantially similar to the nucleotide sequence of the gene or a portion thereof.

In another embodiment, the invention features a double-stranded short interfering nucleic acid (stNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, comprising an antisense region, wherein the antisense region comprises a nucleotide sequence that is complementary to a nucleotide sequence of the gene or a portion thereof, and a sense region, wherein the sense region comprises a nucleotide sequence substantially similar to the nucleotide sequence of the gene or a portion thereof. In one embodiment, the antisense region and the sense region independently comprise about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, wherein the antisense region comprises about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides that are complementary to nucleotides of the sense region.

In another embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, comprising a sense region and an antisense region, wherein the antisense region comprises a nucleotide sequence that is complementary to a

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nucleotide sequence of RNA encoded by the gene or a portion thereof and the sense region comprises a nucleotide sequence that is complementary to the antisense region.

In one embodiment, a siNA molecule of the invention comprises blunt ends, i.e., ends that do not include any overhanging nucleotides. For example, a siNA molecule comprising modifications described herein (e.g., comprising nucleotides having Formulae I-VII or siNA constructs comprising "Stab 00". "Stab 32" (Table II) or any combination thereof (see Table III) and/or any length described herein can comprise blunt ends or ends with no overhanging nucleotides.

In one embodiment, any siNA molecule of the invention can comprise one or more blunt ends, i.e. where a blunt end does not have any overhanging nucleotides. In one embodiment, the blunt ended siNA molecule has a number of base pairs equal to the number of nucleotides present in each strand of the siNA molecule. In another embodiment, the siNA molecule comprises one blunt end, for example wherein the 5'end of the antisense strand and the 3'-end of the sense strand do not have any overhanging nucleotides. In another example, the siNA molecule comprises one blunt end, for example wherein the 3'-end of the antisense strand and the 5'-end of the sense strand do not have any overhanging nucleotides. In another example, a siNA molecule comprises two blunt ends, for example wherein the 3'-end of the antisense strand and the 5'-end of the sense strand as well as the 5'-end of the antisense strand and 3'-end of the sense strand do not have any overhanging nucleotides. A blunt ended siNA molecule can comprise, for example, from about 15 to about 30 nucleotides (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 nucleotides). Other nucleotides present in a blunt ended siNA molecule can comprise, for example, mismatches, bulges, loops, or wobble base pairs to modulate the activity of the siNA molecule to mediate RNA interference.

By "blunt ends" is meant symmetric termini or termini of a double stranded siNA molecule having no overhanging nucleotides. The two strands of a double stranded siNA molecule align with each other without over-hanging nucleotides at the termini. For example, a blunt ended siNA construct comprises terminal nucleotides that are complementary between the sense and antisense regions of the siNA molecule.

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In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, wherein the siNA molecule is assembled from two separate oligonucleotide fragments wherein one fragment comprises the sense region and the second fragment comprises the antisense region of the siNA molecule. The sense region can be connected to the antisense region via a linker molecule, such as a polynucleotide linker or a non-nucleotide linker.

In one embodiment, the invention features double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, wherein the siNA molecule comprises about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) base pairs, and wherein each strand of the siNA molecule comprises one or more chemical modifications. In another embodiment, one of the strands of the double-stranded siNA molecule comprises a nucleotide sequence that is complementary to a nucleotide sequence of a gene or a portion thereof, and the second strand of the double-stranded siNA molecule comprises a nucleotide sequence substantially similar to the nucleotide sequence or a portion thereof of the gene. In another embodiment, one of the strands of the double-stranded siNA molecule comprises a nucleotide sequence that is complementary to a nucleotide sequence of a gene or portion thereof, and the second strand of the double-stranded siNA molecule comprises a nucleotide sequence substantially similar to the nucleotide sequence or portion thereof of the gene. In another embodiment, each strand of the siNA molecule comprises about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides, and each strand comprises at least about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 25 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides that are complementary to the nucleotides of the other strand. The gene can comprise, for example, a gene that encodes sequences referred to in Table I.

In one embodiment, a siNA molecule of the invention comprises no ribonucleotides. In another embodiment, a siNA molecule of the invention comprises ribonucleotides.

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In one embodiment, a siNA molecule of the invention comprises an antisense region comprising a nucleotide sequence that is complementary to a nucleotide sequence of a target gene or a portion thereof, and the siNA further comprises a sense region comprising a nucleotide sequence substantially similar to the nucleotide sequence of the target gene or a portion thereof. In another embodiment, the antisense region and the sense region each comprise about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides and the antisense region comprises at least about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides that are complementary to nucleotides of the sense region. The target gene can comprise, for example, sequence encoding sequences referred to in Table I. In another embodiment, the siNA is a double stranded nucleic acid molecule, where each of the two strands of the siNA molecule independently comprise about 15 to about 40 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 23, 33, 34, 35, 36, 37, 38, 39, or 40) nucleotides, and where one of the strands of the siNA molecule comprises at least about 15 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 or 25 or more) nucleotides that are complementary to the nucleic acid sequence of the gene or a portion thereof.

In one embodiment, a siNA molecule of the invention comprises a sense region and an antisense region, wherein the antisense region comprises a nucleotide sequence that is complementary to a nucleotide sequence of RNA encoded by a target gene, or a portion thereof, and the sense region comprises a nucleotide sequence that is complementary to the antisense region. In one embodiment, the siNA molecule is assembled from two separate oligonucleotide fragments, wherein one fragment comprises the sense region and the second fragment comprises the antisense region of the siNA molecule. In another embodiment, the sense region is connected to the antisense region via a linker molecule, such as a nucleotide or non-nucleotide linker. The target gene can comprise, for example, sequence encoding sequences referred in to Table I.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that WO 2005/044981 PCT/US2004/027403

directs cleavage of a target RNA comprising a sense region and an antisense region, wherein the antisense region comprises a nucleotide sequence that is complementary to a nucleotide sequence of RNA encoded by the target gene or a portion thereof and the sense region comprises a nucleotide sequence that is complementary to the antisense region, and wherein the siNA molecule has one or more modified pyrimidine and/or purine nucleotides. In one embodiment, the pyrimidine nucleotides in the sense region are 2'-O-methyl pyrimidine nucleotides or 2'-deoxy-2'-fluoro pyrimidine nucleotides and the purine nucleotides present in the sense region are 2'-deoxy purine nucleotides. In another embodiment, the pyrimidine nucleotides in the sense region are 2'-deoxy-2'fluoro pyrimidine nucleotides and the purine nucleotides present in the sense region are 2'-O-methyl purine nucleotides. In another embodiment, the pyrimidine nucleotides in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides and the purine nucleotides present in the sense region are 2'-deoxy purine nucleotides. In one embodiment, the pyrimidine nucleotides in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides and the purine nucleotides present in the antisense region are 2'-O-methyl or 2'-deoxy purine nucleotides. In another embodiment of any of the above-described siNA molecules, any nucleotides present in a non-complementary region of the sense strand (e.g. overhang region) are 2'-deoxy nucleotides.

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In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA, wherein the siNA molecule is assembled from two separate oligonucleotide fragments wherein one fragment comprises the sense region and the second fragment comprises the antisense region of the siNA molecule, and wherein the fragment comprising the sense region includes a terminal cap moiety at the 5'-end, the 3'-end, or both of the 5' and 3' ends of the fragment. In one embodiment, the terminal cap moiety is an inverted deoxy abasic moiety or glyceryl moiety. In one embodiment, each of the two fragments of the siNA molecule independently comprise about 15 to about 30 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides. In another embodiment, each of the two fragments of the siNA molecule independently comprise about 15 to about 40 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 23, 33, 34, 35, 36, 37, 38, 39, or 40) nucleotides. In a

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non-limiting example, each of the two fragments of the siNA molecule comprise about 21 nucleotides.

In one embodiment, the invention features a siNA molecule comprising at least one modified nucleotide, wherein the modified nucleotide is a 2'-deoxy-2'-fluoro nucleotide. 5 The siNA can be, for example, about 15 to about 40 nucleotides in length. In one embodiment, all pyrimidine nucleotides present in the siNA are 2'-deoxy-2'-fluoro pyrimidine nucleotides. In one embodiment, the modified nucleotides in the siNA include at least one 2'-deoxy-2'-fluoro cytidine or 2'-deoxy-2'-fluoro uridine nucleotide. In another embodiment, the modified nucleotides in the siNA include at least one 2'fluoro cytidine and at least one 2'-deoxy-2'-fluoro uridine nucleotides. In one embodiment, all uridine nucleotides present in the siNA are 2'-deoxy-2'-fluoro uridine nucleotides. In one embodiment, all cytidine nucleotides present in the siNA are 2'deoxy-2'-fluoro cytidine nucleotides. In one embodiment, all adenosine nucleotides present in the siNA are 2'-deoxy-2'-fluoro adenosine nucleotides. In one embodiment, 15 all guanosine nucleotides present in the siNA are 2'-deoxy-2'-fluoro guanosine nucleotides. The siNA can further comprise at least one modified internucleotidic linkage, such as phosphorothioate linkage. In one embodiment, the 2'-deoxy-2'fluoronucleotides are present at specifically selected locations in the siNA that are sensitive to cleavage by ribonucleases, such as locations having pyrimidine nucleotides.

In one embodiment, the invention features a method of increasing the stability of a siNA molecule against cleavage by ribonucleases comprising introducing at least one modified nucleotide into the siNA molecule, wherein the modified nucleotides in a 2'-deoxy-2'-fluoro nucleotide. In one embodiment, all pyrimidine nucleotides present in the siNA are 2'-deoxy-2'-fluoro pyrimidine nucleotides. In one embodiment, the modified nucleotides in the siNA include at least one 2'-deoxy-2'-fluoro cytidine or 2'-deoxy-2'-fluoro uridine nucleotide. In another embodiment, the modified nucleotides in the siNA include at least one 2'-fluoro cytidine and at least one 2'-deoxy-2'-fluoro uridine nucleotides. In one embodiment, all uridine nucleotides present in the siNA are 2'-deoxy-2'-fluoro uridine nucleotides. In one embodiment, all cytidine nucleotides in the siNA are 2'-deoxy-2'-fluoro uridine nucleotides. In one embodiment, all cytidine nucleotides in the siNA are 2'-deoxy-2'-fluoro uridine nucleotides.

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In one embodiment, all guanosine nucleotides present in the siNA are 2'-deoxy-2'-fluoro guanosine nucleotides. The siNA can further comprise at least one modified internucleotidic linkage, such as phosphorothioate linkage. In one embodiment, the 2'-deoxy-2'-fluoronucleotides are present at specifically selected locations in the siNA that are sensitive to cleavage by ribonucleases, such as locations having pyrimidine nucleotides.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that directs cleavage of a target RNA comprising a sense region and an antisense region, wherein the antisense region comprises a nucleotide sequence that is complementary to a nucleotide sequence of RNA encoded by the gene or a portion thereof and the sense region comprises a nucleotide sequence that is complementary to the antisense region, and wherein the purine nucleotides present in the antisense region comprise 2'-deoxy-purine nucleotides. In an alternative embodiment, the purine nucleotides present in the antisense region comprise 2'-O-methyl purine nucleotides. In either of the above embodiments, the antisense region can comprise a phosphorothioate internucleotide linkage at the 3' end of the antisense region. Alternatively, in either of the above embodiments, the antisense region can comprise a glyceryl modification at the 3' end of the antisense region of the antisense region of the antisense region another embodiment of any of the above-described siNA molecules, any nucleotides present in a non-complementary region of the antisense strand (e.g. overhang region) are 2'-deoxy nucleotides.

In one embodiment, the antisense region of a siNA molecule of the invention comprises sequence complementary to a portion of a target polynucleotide sequence having sequence unique to a particular disease related allele, such as sequence comprising a single nucleotide polymorphism (SNP) associated with the disease specific allele. As such, the antisense region of a siNA molecule of the invention can comprise sequence complementary to sequences that are unique to a particular allele to provide specificity in mediating selective RNAi against the disease, condition, or trait related allele.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that down-regulates expression of a target gene or that WC05044981 [file:///E:/WC05044981.gpc]

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directs cleavage of a target RNA, wherein the siNA molecule is assembled from two separate oligonucleotide fragments wherein one fragment comprises the sense region and the second fragment comprises the antisense region of the siNA molecule. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule, where each strand is about 21 nucleotides long and where about 19 nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule, wherein at least two 3' terminal nucleotides of each fragment of the siNA molecule are not base-paired to the nucleotides of the other fragment of the siNA molecule. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule, where each strand is about 19 nucleotide long and where the nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule to form at least about 15 (e.g., 15, 16, 17, 18, or 19) base pairs, wherein one or both ends of the siNA molecule are blunt ends. In one embodiment, each of the two 3' terminal nucleotides of each fragment of the siNA molecule is a 2'-deoxy-pyrimidine nucleotide, such as a 2'deoxy-thymidine. In another embodiment, all nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule of about 19 to about 25 base pairs having a sense region and an antisense region, where about 19 nucleotides of the antisense region are base-paired to the nucleotide sequence or a portion thereof of the RNA encoded by the target gene. In another embodiment, about 21 nucleotides of the antisense region are base-paired to the nucleotide sequence or a portion thereof of the RNA encoded by the target gene. In any of the above embodiments, the 5'-end of the fragment comprising said antisense region can optionally include a phosphate group.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits the expression of a target RNA sequence (e.g., wherein said target RNA sequence is encoded by a gene involved in a pathway of gene expression), wherein the siNA molecule does not contain any ribonucleotides and wherein each strand of the double-stranded siNA molecule is about 15 to about 30 nucleotides. In one embodiment, the siNA molecule is 21 nucleotides in length. Examples of non-ribonucleotide containing siNA constructs are combinations of

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stabilization chemistries shown in **Table II** in any combination of Sense/Antisense chemistries, such as Stab 7/8, Stab 7/11, Stab 8/8, Stab 18/8, Stab 18/11, Stab 12/13, Stab 7/13, Stab 18/13, Stab 18/19, Stab 18/19, Stab 18/19, Stab 18/19, Stab 18/20, Stab 8/20, Stab 18/20, Stab 8/32, or Stab 18/32 (e.g., any siNA having Stab 7, 8, 11, 12, 13, 14, 15, 17, 18, 19, 20, or 32 sense or antisense strands or any combination thereof).

In one embodiment, the invention features a chemically synthesized double stranded RNA molecule that directs cleavage of a target RNA via RNA interference, wherein each strand of said RNA molecule is about 15 to about 30 nucleotides in length; one strand of the RNA molecule comprises nucleotide sequence having sufficient 10 complementarity to the target RNA for the RNA molecule to direct cleavage of the target RNA via RNA interference; and wherein at least one strand of the RNA molecule optionally comprises one or more chemically modified nucleotides described herein, such as without limitation deoxynucleotides, 2'-O-methyl nucleotides, 2'-deoxy-2'-fluoro nucleotides, 2'-O-methoxyethyl nucleotides etc.

15 In one embodiment, a target RNA of the invention comprises sequence encoding a protein.

In one embodiment, target RNA of the invention comprises non-coding RNA sequence (e.g., miRNA, snRNA siRNA etc.).

In one embodiment, the invention features a medicament comprising a siNA 20 molecule of the invention.

In one embodiment, the invention features an active ingredient comprising a siNA molecule of the invention.

In one embodiment, the invention features the use of a double-stranded short interfering nucleic acid (siNA) molecule to inhibit, down-regulate, or reduce expression of a gene or that directs cleavage of a target RNA, wherein the siNA molecule comprises one or more chemical modifications and each strand of the double-stranded siNA is independently about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 or 30 or more) nucleotides long. In one embodiment, the siNA molecule of the invention is a double stranded nucleic acid molecule comprising one or

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more chemical modifications, where each of the two fragments of the siNA molecule independently comprise about 15 to about 40 (e.g. about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 23, 33, 34, 35, 36, 37, 38, 39, or 40) nucleotides and where one of the strands comprises at least 15 nucleotides that are complementary to nucleotide sequence of target RNA or a portion thereof. In a non-limiting example, each of the two fragments of the siNA molecule comprise about 21 nucleotides. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule comprising one or more chemical modifications, where each strand is about 21 nucleotide long and where about 19 nucleotides of each fragment of the siNA molecule are base-paired to the 10 complementary nucleotides of the other fragment of the siNA molecule, wherein at least two 3' terminal nucleotides of each fragment of the siNA molecule are not base-paired to the nucleotides of the other fragment of the siNA molecule. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule comprising one or more chemical modifications, where each strand is about 19 nucleotide long and where the 15 nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule to form at least about 15 (e.g., 15, 16, 17, 18, or 19) base pairs, wherein one or both ends of the siNA molecule are blunt ends. In one embodiment, each of the two 3' terminal nucleotides of each fragment of the siNA molecule is a 2'-deoxy-pyrimidine nucleotide, such as a 2'-deoxy-thymidine. 20 In another embodiment, all nucleotides of each fragment of the siNA molecule are basepaired to the complementary nucleotides of the other fragment of the siNA molecule. In another embodiment, the siNA molecule is a double stranded nucleic acid molecule of about 19 to about 25 base pairs having a sense region and an antisense region and comprising one or more chemical modifications, where about 19 nucleotides of the antisense region are base-paired to the nucleotide sequence or a portion thereof of the 25 RNA encoded by the target gene. In another embodiment, about 21 nucleotides of the antisense region are base-paired to the nucleotide sequence or a portion thereof of the RNA encoded by the target gene. In any of the above embodiments, the 5'-end of the fragment comprising said antisense region can optionally include a phosphate group.

In one embodiment, the invention features the use of a double-stranded short interfering nucleic acid (siNA) molecule that inhibits, down-regulates, or reduces expression of a target gene or that directs cleavage of a target RNA, wherein one of the

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strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA or a portion thereof, the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand and wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification (e.g., 2'-deoxy-2'-fluoro, 2'-O-methyl, or 2'-deoxy modifications).

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits, down-regulates, or reduces expression of a target gene or that directs cleavage of a target RNA, wherein one of the strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA or a portion thereof, wherein the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand and wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification (e.g., 2'-deoxy-2'-fluror, 2'-O-methyl, or 2'-deoxy modifications).

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits, down-regulates, or reduces expression of a gene or that directs cleavage of a target RNA, wherein one of the strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA that encodes a protein or portion thereof, the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand and wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification. In one embodiment, each strand of the siNA molecule comprises about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides, wherein each strand comprises at least about 15 nucleotides that are complementary to the nucleotides of the other strand. In one embodiment, the siNA molecule is assembled from two oligonucleotide fragments, wherein one fragment comprises the nucleotide sequence of the antisense strand of the

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siNA molecule and a second fragment comprises nucleotide sequence of the sense region of the siNA molecule. In one embodiment, the sense strand is connected to the antisense strand via a linker molecule, such as a polynucleotide linker or a non-nucleotide linker. In a further embodiment, the pyrimidine nucleotides present in the sense strand are 2'-5 deoxy-2'fluoro pyrimidine nucleotides and the purine nucleotides present in the sense region are 2'-deoxy purine nucleotides. In another embodiment, the pyrimidine nucleotides present in the sense strand are 2'-deoxy-2'fluoro pyrimidine nucleotides and the purine nucleotides present in the sense region are 2'-O-methyl purine nucleotides. In still another embodiment, the pyrimidine nucleotides present in the antisense strand are 2'-deoxy-2'-fluoro pyrimidine nucleotides and any purine nucleotides present in the antisense strand are 2'-deoxy purine nucleotides. In another embodiment, the antisense strand comprises one or more 2'-deoxy-2'-fluoro pyrimidine nucleotides and one or more 2'-O-methyl purine nucleotides. In another embodiment, the pyrimidine nucleotides present in the antisense strand are 2'-deoxy-2'-fluoro pyrimidine nucleotides and any purine nucleotides present in the antisense strand are 2'-O-methyl purine nucleotides. In a further embodiment the sense strand comprises a 3'-end and a 5'-end, wherein a terminal cap moiety (e.g., an inverted deoxy abasic moiety or inverted deoxy nucleotide moiety such as inverted thymidine) is present at the 5'-end, the 3'-end, or both of the 5' and 3' ends of the sense strand. In another embodiment, the antisense strand comprises a phosphorothicate internucleotide linkage at the 3' end of the antisense strand. In another embodiment, the antisense strand comprises a glyceryl modification at the 3' end. In another embodiment, the 5'-end of the antisense strand optionally includes a phosphate group.

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In any of the above-described embodiments of a double-stranded short interfering nucleic acid (siNA) molecule that inhibits expression of a target gene or that directs cleavage of a target RNA, wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification, each of the two strands of the siNA molecule can comprise about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides. In one embodiment, about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides of each strand of the siNA molecule are base-paired to the complementary nucleotides of the other strand of the siNA molecule.

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In another embodiment, about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides of each strand of the siNA molecule are base-paired to the complementary nucleotides of the other strand of the siNA molecule, wherein at least two 3' terminal nucleotides of each strand of the siNA molecule are not base-paired to the nucleotides of the other strand of the siNA molecule. In another embodiment, each of the two 3' terminal nucleotides of each fragment of the siNA molecule is a 2'-deoxy-pyrimidine, such as 2'-deoxy-thymidine. In one embodiment, each strand of the siNA molecule is base-paired to the complementary nucleotides of the other strand of the siNA molecule. In one embodiment, about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides of the antisense strand are base-paired to the nucleotide sequence of the target RNA or a portion thereof. In one embodiment, about 18 to about 25 (e.g., about 18, 19, 20, 21, 22, 23, 24, or 25) nucleotides of the antisense strand are base-paired to the nucleotide sequence of the target RNA or a portion thereof.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits expression of a target gene or that directs cleavage of a target RNA, wherein one of the strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA or a portion thereof, the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand and wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification, and wherein the 5'-end of the antisense strand optionally includes a phosphate group.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits expression of a target gene or that directs cleavage of a target RNA, wherein one of the strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA or a portion thereof, the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand and wherein a majority of the pyrimidine

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nucleotides present in the double-stranded siNA molecule comprises a sugar modification, and wherein the nucleotide sequence or a portion thereof of the antisense strand is complementary to a nucleotide sequence of the untranslated region or a portion thereof of the target R.NA.

In one embodiment, the invention features a double-stranded short interfering nucleic acid (siNA) molecule that inhibits expression of a target gene or that directs cleavage of a target RNA, wherein one of the strands of the double-stranded siNA molecule is an antisense strand which comprises nucleotide sequence that is complementary to nucleotide sequence of target RNA or a portion thereof, wherein the other strand is a sense strand which comprises nucleotide sequence that is complementary to a nucleotide sequence of the antisense strand, wherein a majority of the pyrimidine nucleotides present in the double-stranded siNA molecule comprises a sugar modification, and wherein the nucleotide sequence of the antisense strand is complementary to a nucleotide sequence of the target RNA or a portion thereof that is present in the target RNA.

In one embodiment, the invention features a composition comprising a siNA molecule of the invention in a pharmaceutically acceptable carrier or diluent.

In a non-limiting example, the introduction of chemically-modified nucleotides into nucleic acid molecules provides a powerful tool in overcoming potential limitations of in vivo stability and bioavailability inherent to native RNA molecules that are delivered exogenously. For example, the use of chemically-modified nucleic acid molecules can enable a lower dose of a particular nucleic acid molecule for a given therapeutic effect since chemically-modified nucleic acid molecules tend to have a longer half-life in serum. Furthermore, certain chemical modifications can improve the bioavailability of nucleic acid molecules by targeting particular cells or tissues and/or improving cellular up take of the nucleic acid molecule. Therefore, even if the activity of a chemically-modified nucleic acid molecule. Therefore, even if the activity of a chemically-modified nucleic acid molecule is reduced as compared to a native nucleic acid molecule, for example, when compared to an all-RNA nucleic acid molecule, the overall activity of the modified nucleic acid molecule can be greater than that of the native molecule due to improved stability and/or delivery of the molecule. Unlike native

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ummodified siNA, chemically-modified siNA can also minimize the possibility of activating interferon activity in humans.

In any of the embodiments of siNA molecules described herein, the antisense region of a siNA molecule of the invention can comprise a phosphorothioate internucleotide linkage at the 3'-end of said antisense region. In any of the embodiments of siNA molecules described herein, the antisense region can comprise about one to about five phosphorothioate internucleotide linkages at the 5'-end of said antisense region. In any of the embodiments of siNA molecules described herein, the 3'-terminal nucleotide overhangs of a siNA molecule of the invention can comprise ribonucleotides or deoxyribonucleotides that are chemically-modified at a nucleic acid sugar, base, or backbone. In any of the embodiments of siNA molecules described herein, the 3'-terminal nucleotide overhangs can comprise one or more universal base ribonucleotides. In any of the embodiments of siNA molecules described herein, the 3'-terminal nucleotide overhangs can comprise one or more acyclic nucleotides.

One embodiment of the invention provides an expression vector comprising a nucleic acid sequence encoding at least one siNA molecule of the invention in a manner that allows expression of the nucleic acid molecule. Another embodiment of the invention provides a mammalian cell comprising such an expression vector. The mammalian cell can be a human cell. The siNA molecule of the expression vector can comprise a sense region and an antisense region. The antisense region can comprise sequence complementary to a RNA or DNA sequence encoding the target and the sense region can comprise sequence complementary to the antisense region. The siNA molecule can comprise two distinct strands having complementary sense and antisense regions. The siNA molecule can comprise a single strand having complementary sense and antisense regions.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) nucleotides comprising a backbone modified internucleotide linkage having Formula I:

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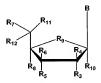
wherein each R1 and R2 is independently any nucleotide, non-nucleotide, or polynucleotide which can be naturally-occurring or chemically-modified, each X and Y is independently O, S, N, alkyl, or substituted alkyl, each Z and W is independently O, S, N, alkyl, substituted alkyl, S-alkyl, alkaryl, aralkyl, or acetyl and wherein W, X, Y, and Z are optionally not all O. In another embodiment, a backbone modification of the invention comprises a phosphonoacetate and/or thiophosphonacetate internucleotide linkage (see for example Shechan et al., 2003, Nucleic Acids Research, 31, 4109-4118).

The chemically-modified internucleotide linkages having Formula I, for example, wherein any Z, W, X, and/or Y in dependently comprises a sulphur atom, can be present in one or both oligonucleotide strands of the siNA duplex, for example, in the sense strand, the antisense strand, or both strands. The siNA molecules of the invention can comprise one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) chemicallymodified internucleotide linkages having Formula I at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of the sense straind, the antisense strand, or both strands. For example, an exemplary siNA molecule of the invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) chemically-modified internucleotide linkages having Formula I at the 5'-end of the sense strand, the antisense strand, or both strands. In another non-limiting example, an exemplary siNA molecule of the invention can comprise one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) pyrimidine nucleotides with chemically-modified internucleotide linkages having Formula I in the sense strand, the antisense strand, or both strands. In yet another non-limiting example, an exemplary siNA molecule of the invention can comprise one or more (e.g., about 1, 2, 3. 4. 5. 6. 7. 8. 9. 10. or more) purine nucleotides with chemically-modified internucleotide linkages having Formula I in the sense strand, the antisense strand, or both strands. In another embodiment, a siNA molecule of the invention having internucleotide linkage(s) of Formula I also comprises a chemically-modified nucleotide or non-nucleotide having any of Formulae I-VII.

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In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) nucleotides or non-nucleotides having Formula II:



wherein each R3, R4, R5, R6, R7, R8, R10, R11 and R12 is independently H, OH, alkyl, substituted alkyl, alkaryl or aralkyl, F, Cl, Br, CN, CF3, OCF3, OCN, O-alkyl, S-alkyl, N-alkyl, O-alkenyl, S-alkyl, N-alkyl, O-alkenyl, S-alkyl, N-alkyl-OSH, alkyl-OSH, alkyl-OH, O-alkyl-OH, O-alkyl-OH, S-alkyl-SH, alkyl-O-alkyl, ONO2, NO2, N3, NH2, aminoalkyl, aminoacid, aminoacyl, ONH2, O-aminoakyl, O-aminoacid, O-aminoackyl, heterocycloalkyl, heterocycloalkaryl, aminoalkylamino, polyalkylamino, substituted silyl, or group having Formula I or II; R9 is O, S, CH2, S=O, CHF, or CF2, and B is a nucleosidic base such as adenine, guanine, uracil, cytosine, thymine, 2-aminoadenosine, 5-methylcytosine, 2,6-diaminopurine, or any other non-naturally occurring base that can be complementary or non-complementary to target RNA or a non-nucleosidic base such as phenyl, naphthyl, 3-nitropyrrole, 5-nitroindole, nebularine, pyridone, pyridinone, or any other non-naturally occurring universal base that can be complementary to target RNA.

The chemically-modified nucleotide or non-nucleotide of Formula II can be present in one or both oligonucleotide strands of the siNA duplex, for example in the sense strand, the antisense strand, or both strands. The siNA molecules of the invention can comprise one or more chemically-modified nucleotides or non-nucleotides of Formula II at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of the sense strand, the antisense strand, or both strands. For example, an exemplary siNA molecule of the

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invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) chemically-modified nucleotides or non-nucleotides of Formula II at the 5'-end of the sense strand, the antisense strand, or both strands. In anther non-limiting example, an exemplary siNA molecule of the invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) chemically-modified nucleotides or non-nucleotides of Formula II at the 3'-end of the sense strand, the antisense strand, or both strands.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) nucleotides or non-nucleotides having Formula III:

$$\begin{matrix} R_7 \\ R_{12} \\ R_{0} \\ R_{0} \\ R_{5} \\ R_{5} \end{matrix} \begin{matrix} R_{10} \\ R_{1$$

wherein each R3, R4, R5, R6, R7, R8, R10, R11 and R12 is independently H, OH, alkyl, substituted alkyl, alkaryl or aralkyl, F, Cl, Br, CN, CF3, OCF3, OCN, O-alkyl, S-alkyl, N-alkyl, O-alkenyl, S-alkyl, N-alkyl-O-alkyl-OSH, alkyl-OH, O-alkyl-OH, O-alkyl-OH, S-alkyl-SH, alkyl-OSH, alkyl-OH, O-alkyl-ON, N02, N02, N14, Alkyl-O-aminoackyl, aminoackyl, aminoackyl, aminoackyl, one aminoackyl, o-aminoackyl, O-aminoackyl, O-aminoackyl, o-aminoackyl, or group having Formula I or II; R9 is O, S, CH2, S=O, CHF, or CF2, and B is a nucleosidic base such as adenine, guanine, uracil, cytosine, thymine, 2-aminoadenosine, 5-methylcytosine, 2,6-diaminopurine, or any other non-naturally occurring base that can be employed to be complementary or non-complementary to target RNA or a non-nucleosidic base such as phenyl, naphthyl, 3-nitropyrrole, 5-nitroindole, nebularine, pyridone, pyridinone, or any other non-naturally occurring universal base that can be complementary or non-complementary to target RNA.

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The chemically-modified nucleotide or non-nucleotide of Formula III can be present in one or both oligonucleotide strands of the siNA duplex, for example, in the sense strand, the antisense strand, or both strands. The siNA molecules of the invention can comprise one or more chemically-modified nucleotides or non-nucleotides of Formula III at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of the sense strand, the antisense strand, or both strands. For example, an exemplary siNA molecule of the invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) chemically-modified nucleotide(s) or non-nucleotide(s) of Formula III at the 5'-end of the sense strand, the antisense strand, or both strands. In anther non-limiting example, an exemplary siNA molecule of the invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) chemically-modified nucleotide or non-nucleotide of Formula III at the 3'-end of the sense strand, the antisense strand, or both strands.

In another embodiment, a siNA molecule of the invention comprises a nucleotide having Formula II or III, wherein the nucleotide having Formula II or III is in an inverted configuration. For example, the nucleotide having Formula II or III is connected to the siNA construct in a 3'-3', 3'-2', 2'-3', or 5'-5' configuration, such as at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of one or both siNA strands.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises a 5'-terminal phosphate group having Formula IV:

wherein each X and Y is independently O, S, N, alkyl, substituted alkyl, or alkylhalo; wherein each Z and W is independently O, S, N, alkyl, substituted alkyl, O-alkyl, S-alkyl, alkyl, alkylhalo, or acetyl; and wherein W, X, Y and Z are not all O.

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In one embodiment, the invention features a siNA molecule having a 5'-terminal phosphate group having Formula IV on the target-complementary strand, for example, a strand complementary to a target RNA, wherein the siNA molecule comprises an all RNA siNA molecule. In another embodiment, the invention features a siNA molecule having a 5'-terminal phosphate group having Formula IV on the target-complementary strand wherein the siNA molecule also comprises about 1 to about 3 (e.g., about 1, 2, or 3) nucleotide 3'-terminal nucleotide overhangs having about 1 to about 4 (e.g., about 1, 2, o, o, of 4) deoxyribonucleotides on the 3'-end of one or both strands. In another embodiment, a 5'-terminal phosphate group having Formula IV is present on the target-complementary strand of a siNA molecule of the invention, for example a siNA molecule having chemical modifications having any of Formulae I-VII.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises one or more phosphorothioate internucleotide linkages. For example, in a non-limiting example, the invention features a chemically-modified short interfering nucleic acid (siNA) having about 1, 2, 3, 4, 5, 6, 7. 8 or more phosphorothicate internucleotide linkages in one siNA strand. In vet another embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) individually having about 1, 2, 3, 4, 5, 6, 7, 8 or more phosphorothioate internucleotide linkages in both siNA strands. The phosphorothioate internucleotide linkages can be present in one or both oligonucleotide strands of the siNA duplex, for example in the sense strand, the antisense strand, or both strands. The siNA molecules of the invention can comprise one or more phosphorothioate internucleotide linkages at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the sense strand, the antisense strand, or both strands. For example, an exemplary siNA molecule of the invention can comprise about 1 to about 5 or more (e.g., about 1, 2, 3, 4, 5, or more) consecutive phosphorothioate internucleotide linkages at the 5'-end of the sense strand, the antisense strand, or both strands. In another non-limiting example, an exemplary siNA molecule of the invention can comprise one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) pyrimidine phosphorothioate internucleotide linkages in the sense strand, the antisense strand, or both strands. In yet another non-limiting example,

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an exemplary siNA molecule of the invention can comprise one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) purine phosphorothioate internucleotide linkages in the sense strand, the antisense strand, or both strands.

In one embodiment, a siNA molecule of the invention is featured, wherein the sense strand comprises one or more, for example, about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or about one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the sense strand; and wherein the antisense strand comprises about 1 to about 10 or more, specifically about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the antisense strand. In another embodiment, one or more, for example about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more, pyrimidine nucleotides of the sense and/or antisense siNA strand are chemically-modified with 2'-deoxy, 2'-O-methyl and/or 2'-deoxy-2'-fluoro nucleotides, with or without one or more, for example about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more, phosphorothioate internucleotide linkages and/or a terminal cap molecule at the 3'end, the 5'-end, or both of the 3'- and 5'-ends, being present in the same or different strand.

In another embodiment, a siNA molecule of the invention is featured, wherein the sense strand comprises about 1 to about 5, specifically about 1, 2, 3, 4, or 5 phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, or more) 2"dcoxy, 2"-O-methyl, 2"-dcoxy-2"-fluoro, and/or one or more (e.g., about 1, 2, 3, 4, 5, or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3-end, the 5"-end, or both of the 3"- and 5"-ends of the sense strand; and wherein the antisense strand comprises about 1 to a bout 5 or more, specifically about 1, 2, 3, 4, 5, or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2"dcoxy, 2"-O-methyl, 2"-dcoxy-2"-fluoro, about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2"dcoxy, 2"-O-methyl, 2"-dcoxy-2"-fluoro,

and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the antisense strand. In another embodiment, one or more, for example about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more, pyrimidine nucleotides of the sense and/or antisense siNA strand are chemically-modified with 2'-deoxy, 2'-O-methyl and/or 2'-deoxy-2'-fluoro nucleotides, with or without about 1 to about 5 or more, for example about 1, 2, 3, 4, 5, or more phosphorothioate internucleotide linkages and/or a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends, being present in the same or different strand.

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In one embodiment, a siNA molecule of the invention is featured, wherein the antisense strand comprises one or more, for example, about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more phosphorothicate internucleotide linkages, and/or about one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'ends of the sense strand; and wherein the antisense strand comprises about 1 to about 10 or more, specifically about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the antisense strand. In another embodiment, one or more, for example about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more pyrimidine nucleotides of the sense and/or antisense siNA strand are chemically-modified with 2'-deoxy, 2'-O-methyl and/or 2'-deoxy-2'-fluoro nucleotides, with or without one or more, for example, about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more phosphorothioate internucleotide linkages and/or a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3' and 5'-ends, being present in the same or different strand.

In another embodiment, a siNA molecule of the invention is featured, wherein the antisense strand comprises about 1 to about 5 or more, specifically about 1, 2, 3, 4, 5 or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or one or more

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(e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends of the sense strand; and wherein the antisense strand comprises about 1 to about 5 or more, specifically about 1, 2, 3, 4, 5 or more phosphorothioate internucleotide linkages, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) 2'-deoxy, 2'-O-methyl, 2'-deoxy-2'-fluoro, and/or one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more) universal base modified nucleotides, and optionally a terminal cap molecule at the 3'end, the 5'-end, or both of the 3'- and 5'-ends of the antisense strand. In another embodiment, one or more, for example about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more pyrimidine nucleotides of the sense and/or antisense siNA strand are chemicallymodified with 2'-deoxy, 2'-O-methyl and/or 2'-deoxy-2'-fluoro nucleotides, with or without about 1 to about 5, for example about 1, 2, 3, 4, 5 or more phosphorothioate internucleotide linkages and/or a terminal cap molecule at the 3'-end, the 5'-end, or both of the 3'- and 5'-ends, being present in the same or different strand.

In one embodiment, a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprises about 1 to about 5 or more (specifically about 1, 2, 3, 4, 5 or more) phosphorothicate internucleotide linkages in each strand of the siNA molecule.

In another embodiment, a siNA molecule of the invention comprises 2'-5' internucleotide linkages. The 2'-5' internucleotide linkage(s) can be at the 3'-end, the 5'end, or both of the 3'- and 5'-ends of one or both siNA sequence strands. In addition, the 2'-5' internucleotide linkage(s) can be present at various other positions within one or both siNA sequence strands, for example, about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more including every internucleotide linkage of a pyrimidine nucleotide in one or both strands of the siNA molecule can comprise a 2'-5' internucleotide linkage, or about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more including every internucleotide linkage of a purine nucleotide in one or both strands of the siNA molecule can comprise a 2'-5' internucleotide linkage.

In another embodiment, a chemically-modified siNA molecule of the invention comprises a duplex having two strands, one or both of which can be chemicallymodified, wherein each strand is independently about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides in length, wherein the

duplex has about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) base pairs, and wherein the chemical modification comprises a structure having any of Formulae I-VII. For example, an exemplary chemicallymodified siNA molecule of the invention comprises a duplex having two strands, one or both of which can be chemically-modified with a chemical modification having any of Formulae I-VII or any combination thereof, wherein each strand consists of about 21 nucleotides, each having a 2-nucleotide 3'-terminal nucleotide overhang, and wherein the duplex has about 19 base pairs. In another embodiment, a siNA molecule of the invention comprises a single stranded hairpin structure, wherein the siNA is about 36 to about 70 (e.g., about 36, 40, 45, 50, 55, 60, 65, or 70) nucleotides in length having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) base pairs, and wherein the siNA can include a chemical modification comprising a structure having any of Formulae I-VII or any combination, thereof. For example, an exemplary chemically-modified siNA molecule of the invention comprises a linear oligonucleotide having about 42 to about 50 (e.g., about 42, 43, 44, 45, 46, 47, 48, 49, or 50) nucleotides that is chemically-modified with a chemical modification having any of Formulae I-VII or any combination thereof, wherein the linear oligonucleotide forms a hairpin structure having about 19 to about 21 (e.g., 19, 20, or 21) base pairs and a 2nucleotide 3'-terminal nucleotide overhang. In another embodiment, a linear hairpin siNA molecule of the invention contains a stem loop motif, wherein the loop portion of the siNA molecule is biodegradable. For example, a linear hairpin siNA molecule of the invention is designed such that degradation of the loop portion of the siNA molecule in vivo can generate a double-stranded siNA molecule with 3'-terminal overhangs, such as 3'-terminal nucleotide overhangs comprising about 2 nucleotides.

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In another embodiment, a siNA molecule of the invention comprises a hairpin structure, wherein the siNA is about 25 to about 50 (e.g., about 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, or 50) nucleotides in length having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) base pairs, and wherein the siNA can include one or more chemical modifications comprising a structure having any of Formulae I-VII or any combination thereof. For example, an exemplary chemically—modified siNA molecule of the invention comprises a linear oligonucleotide having about 25 to about 35 (e.g., about

25, 26, 27, 28, 29, 30, 31, 32, 33, 34, or 35) nucleotides that is chemically-modified with one or more chemical modifications having any of Formulae I-VII or any combination thereof, wherein the linear oligomucleotide forms a hairpin structure having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) base pairs and a 5'-terminal phosphate group that can be chemically modified as described herein (for example a 5'-terminal phosphate group having Formula IV). In another embodiment, a linear hairpin siNA molecule of the invention contains a stem loop motif, wherein the loop portion of the siNA molecule is biodegradable. In one embodiment, a linear hairpin siNA molecule of the invention comprises a loop portion comprising a non-nucleotide linker.

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In another embodiment, a siNA molecule of the invention comprises an asymmetric hairpin structure, wherein the siNA is about 25 to about 50 (e.g., about 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, or 50) nucleotides in length having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) base pairs, and wherein the siNA can include one or more chemical modifications comprising a structure having any of Formulae I-VII or any combination thereof. For example, an exemplary chemicallymodified siNA molecule of the invention comprises a linear oligonucleotide having about 25 to about 35 (e.g., about 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, or 35) nucleotides that is chemically-modified with one or more chemical modifications having any of Formulae I-VII or any combination thereof, wherein the linear oligonucleotide forms an asymmetric hairpin structure having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) base pairs and a 5'-terminal phosphate group that can be chemically modified as described herein (for example a 5'terminal phosphate group having Formula IV). In one embodiment, an asymmetric hairpin siNA molecule of the invention contains a stem loop motif, wherein the loop portion of the siNA molecule is biodegradable. In another embodiment, an asymmetric hairpin siNA molecule of the invention comprises a loop portion comprising a nonnucleotide linker.

In another embodiment, a siNA molecule of the invention comprises an asymmetric double stranded structure having separate polynucleotide strands comprising

sense and antisense regions, wherein the antisense region is about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides in length, wherein the sense region is about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) nucleotides in length, wherein the sense region and the antisense region have at least 3 complementary nucleotides, and wherein the siNA can include one or more chemical modifications comprising a structure having any of Formulae I-VII or any combination thereof. For example, an exemplary chemically-modified siNA molecule of the invention comprises an asymmetric double stranded structure having separate polynucleotide strands comprising sense and antisense regions, wherein the antisense region is about 18 to about 23 (e.g., about 18, 19, 20, 21, 22, or 23) nucleotides in length and wherein the sense region is about 3 to about 15 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, or 15) nucleotides in length, wherein the sense region the antisense region have at least 3 complementary nucleotides, and wherein the siNA can include one or more chemical modifications comprising a structure having any of Formulae I-VII or any combination thereof. In another embodiment, the asymmetric double stranded siNA molecule can also have a 5'-terminal phosphate group that can be chemically modified as described herein (for example a 5'-terminal phosphate group having Formula IV).

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In another embodiment, a siNA molecule of the invention comprises a circular nucleic acid molecule, wherein the siNA is about 38 to about 70 (e.g., about 38, 40, 45, 50, 55, 60, 65, or 70) nucleotides in length having about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) base pairs, and wherein the siNA can include a chemical modification, which comprises a structure having any of Formulae I-VII or any combination thereof. For example, an exemplary chemically-modified siNA molecule of the invention comprises a circular oligonucleotide having about 42 to about 50 (e.g., about 42, 43, 44, 45, 46, 47, 48, 49, or 50) nucleotides that is chemically-modified with a chemical modification having any of Formulae I-VII or any combination thereof, wherein the circular oligonucleotide forms a dumbbell shaped structure having about 19 base pairs and 2 loops.

In another embodiment, a circular siNA molecule of the invention contains two loop motifs, wherein one or both loop portions of the siNA molecule is biodegradable.

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For example, a circular siNA molecule of the invention is designed such that degradation of the loop portions of the siNA molecule in vivo can generate a double-stranded siNA molecule with 3'-terminal overhangs, such as 3'-terminal nucleotide overhangs comprising about 2 nucleotides.

In one embodiment, a siNA molecule of the invention comprises at least one (e.g., 5 about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) abasic moiety, for example a compound having Formula V:

wherein each R3, R4, R5, R6, R7, R8, R10, R11, R12, and R13 is independently H, OH, alkyl, substituted alkyl, alkaryl or aralkyl, F, Cl, Br, CN, CF3, OCF3, OCN, O-alkyl, Salkyl, N-alkyl, O-alkenyl, S-alkenyl, N-alkenyl, SO-alkyl, alkyl-OSH, alkyl-OH, Oalkyl-OH, O-alkyl-SH, S-alkyl-OH, S-alkyl-SH, alkyl-S-alkyl, alkyl-O-alkyl, ONO2, NO2, N3, NH2, aminoalkyl, aminoacid, aminoacyl, ONH2, O-arninoalkyl, O-aminoacid, O-aminoacyl, heterocycloalkyl, heterocycloalkaryl, aminoalkylamino, polyalklylamino, substituted silyl, or group having Formula I or II; R9 is O, S, CH2, S=O, CHF, or CF2.

In one embodiment, a siNA molecule of the invention comprises at least one (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) inverted abasic moiety, for example a compound having Formula VI:

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wherein each R3, R4, R5, R6, R7, R8, R10, R11, R12, and R13 is independently H, OH, alkyl, substituted alkyl, alkaryl or aralkyl, F, Cl, Br, CN, CF3, OCF3, OCN, O-alkyl, S-alkyl, N-alkyl, O-alkonyl, S-alkenyl, N-alkenyl, SO-alkyl, alkyl-OSH, alkyl-OH, O-alkyl, O-alkyl-OH, O-alkyl-OH, O-alkyl-OH, O-alkyl-OH, O-alkyl-OH, O-alkyl-OH, O-antinoacyl, NO2, N3, NH2, aminoalkyl, minoacid, aminoacyl, ONH2, O-aminoalkyl, O-arrainoacid, O-aminoacyl, heterocycloalkyl, heterocycloalkaryl, aminoalkylamino, polyalklylamino, substituted silyl, or group having Formula I or II; R9 is O, S, CH2, S=O, CHF, or CF2, and either R2, R3, R8 or R13 serve as points of attachment to the siNA molecule of the invention.

In another embodiment, a siNA molecule of the invention comprises at least one (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) substituted polyalkyl moieties, for example a compound having Formula VII:

$$R_1$$
 $R_2$ 
 $R_3$ 

wherein each n is independently an integer from 1 to 12, each R1, R2 and R3 is independently H, OH, alkyl, substituted alkyl, alkaryl or aralkyl, F, Cl, Br, CN, CF3, OCF3, OCN, O-alkyl, S-alkyl, N-alkyl, O-alkenyl, S-alkenyl, S-alkenyl, S-alkyl-SH, alkyl-OH, O-alkyl-OH, O-alkyl-SH, S-alkyl-OH, S-alkyl-SH, alkyl-S-alkyl, alkyl-O-alkyl, ONO2, NO2, N3, NH2, aminoalkyl, aminoacid, aminoacyl, ONH2, O-aminoalkyl, O-aminoacyl, O-aminoacyl, O-aminoalkyl, heterocycloalkyl, heterocycloalkyl, aminoalkyl, heterocycloalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, aminoalkyl, heterocycloalkyl, aminoalkyl, aminoalkyl,

In another embodiment, a siNA molecule of the invention comprises a cormpound having Formula VII, wherein R1 and R2 are hydroxyl (OH) groups, n = 1, and R3 comprises O and is the point of attachment to the 3'-end, the 5'-end, or both of the 3' and 5'-ends of one or both strands of a double-stranded siNA molecule of the invention or to a single-stranded siNA molecule of the invention. This modification is referred to herein as "glyceryl" (for example modification 6 in Figure 10).

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In another embodiment, a chemically modified nucleoside or non-nucleoside (e.g. a moiety having any of Formula V, VI or VII) of the invention is at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of a siNA molecule of the invention. For example, chemically modified nucleoside or non-nucleoside (e.g., a moiety having Formula V, VI 5 or VII) can be present at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of the antisense strand, the sense strand, or both antisense and sense strands of the siNA molecule. In one embodiment, the chemically modified nucleoside or non-nucleoside (e.g., a moiety having Formula V, VI or VII) is present at the 5'-end and 3'-end of the sense strand and the 3'-end of the antisense strand of a double stranded siNA molecule of the invention. In one embodiment, the chemically modified nucleoside or nonnucleoside (e.g., a moiety having Formula V, VI or VII) is present at the terminal position of the 5'-end and 3'-end of the sense strand and the 3'-end of the anti-sense strand of a double stranded siNA molecule of the invention. In one embodiment, the chemically modified nucleoside or non-nucleoside (e.g., a moiety having Formula V, VI or VII) is present at the two terminal positions of the 5'-end and 3'-end of the sense strand and the 3'-end of the antisense strand of a double stranded siNA molecule of the invention. In one embodiment, the chemically modified nucleoside or non-nucleoside (e.g., a moiety having Formula V, VI or VII) is present at the penultimate position of the 5'-end and 3'-end of the sense strand and the 3'-end of the antisense strand of a double stranded siNA molecule of the invention. In addition, a moiety having Formula VII can be present at the 3'-end or the 5'-end of a hairpin siNA molecule as described herein.

In another embodiment, a siNA molecule of the invention comprises an abasic residue having Formula V or VI, wherein the abasic residue having Formula VI or VI is connected to the siNA construct in a 3'-3', 3'-2', 2'-3', or 5'-5' configuration, such as at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of one or both siNA strands.

In one embodiment, a siNA molecule of the invention comprises one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) locked nucleic acid (LNA) nucleotides, for example, at the 5'-end, the 3'-end, both of the 5' and 3'-ends, or any combination thereof, of the siNA molecule.

In another embodiment, a siNA molecule of the invention comprises one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) acyclic nucleotides, for example, at the

5'-end, the 3'-end, both of the 5' and 3'-ends, or any combination thereof, of the siNA molecule.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising a sense region, wherein any 5 (e.g., one or more or all) pyrimidine nucleotides present in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and wherein any (e.g., one or more or all) purine nucleotides present in the sense region are 2'-deoxy purine nucleotides (e.g., wherein all purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising a sense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides, and wherein any (e.g., one or more or all) purine nucleotides present in the sense region are 2'-deoxy purine nucleotides (e.g., wherein all purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides), wherein any nucleotides comprising a 3'-terminal nucleotide overhang that are present in said sense region are 2'-deoxy nucleotides.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising a sense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides, and wherein any (e.g., one or more or all) purine nucleotides present in the sense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides).

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In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising a sense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the sense region are 2'-dooxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-dooxy-2'-fluoro pyrimidine nucleotides are plurality of pyrimidine nucleotides are 2'-dooxy-2'-fluoro pyrimidine nucleotides, wherein any (e.g., one or more or all) purine nucleotides present in the sense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides), and wherein any nucleotides or alternately a flurality of purine nucleotides are 2'-O-methyl purine nucleotides), and wherein any nucleotides or alternately a flurality of purine nucleotides are 2'-O-methyl purine nucleotides), and wherein any nucleotides or alternately a flurality of purine nucleotides are 2'-O-methyl purine nucleotides).

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In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising an antisense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and wherein any (e.g., one or more or all) purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising an antisense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), wherein any (e.g., one or more or all) purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides), and wherein any nucleotides comprising a 3'-terminal nucleotide overhang that are present in said antisense region are 2'-deoxy nucleotides.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising an antisense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and wherein any (e.g., one or more or all) purine nucleotides present in the antisense region are 2'-deoxy purine nucleotides (e.g., wherein all purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides).

In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention comprising an antisense region, wherein any (e.g., one or more or all) pyrimidine nucleotides present in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and wherein any (e.g., one or more or all) purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides).

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In one embodiment, the invention features a chemically-modified short interfering nucleic acid (siNA) molecule of the invention capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system comprising a sense region, wherein one or more pyrimidine nucleotides in present in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and one or more purine nucleotides present in the sense region are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides), and an antisense region, wherein one or more pyrimidine nucleotides present in the antisense region, wherein one or more pyrimidine nucleotides present in the antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of

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pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and one or more purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides). The sense region and/or the antisense region can have a terminal cap modification, such as any modification described herein or shown in Figure 10, that is optionally present at the 3'end, the 5'-end, or both of the 3' and 5'-ends of the sense and/or antisense sequence. The sense and/or antisense region can optionally further comprise a 3'-terminal nucleotide overhang having about 1 to about 4 (e.g., about 1, 2, 3, or 4) 2'-deoxynucleotides. The overhang nucleotides can further comprise one or more (e.g., about 1, 2, 3, 4 or more) phosphorothicate, phosphonoacetate, and/or thiophosphonoacetate internucleotide linkages. Non-limiting examples of these chemically-modified siNAs are shown in Figures 4 and 5 and Table II herein. In any of these described embodiments, the purine nucleotides present in the sense region are alternatively 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides) and one or more purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides). Also, in any of these embodiments, one or more purine nucleotides present in the sense region are alternatively purine ribonucleotides (e.g., wherein all purine nucleotides are purine ribonucleotides or alternately a plurality of purine nucleotides are purine ribonucleotides) and any purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides). Additionally, in any of these embodiments, one or more purine nucleotides present in the sense region and/or present in the antisense region are alternatively selected from the group consisting of 2'-deoxy nucleotides, locked nucleic acid (LNA) nucleotides, 2'methoxyethyl nucleotides, 4'-thionucleotides, and 2'-O-methyl nucleotides (e.g., wherein all purine nucleotides are selected from the group consisting of 2'-deoxy nucleotides, locked nucleic acid (LNA) nucleotides, 2'-methoxyethyl nucleotides, 4'thionucleotides, and 2'-O-methyl nucleotides or alternately a plurality of purine

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nucleotides are selected from the group consisting of 2'-deoxy nucleotides, locked nucleic acid (LNA) nucleotides, 2'-methoxyethyl nucleotides, 4'-thionucleotides, and 2'-O-methyl nucleotides).

In another embodiment, any modified nucleotides present in the siNA molecules of the invention, preferably in the antisense strand of the siNA molecules of the invention, but also optionally in the sense and/or both antisense and sense strands, comprise modified nucleotides having properties or characteristics similar to naturally occurring ribonucleotides. For example, the invention features siNA molecules including modified nucleotides having a Northern conformation (e.g., Northern pseudorotation cycle, see for example Saenger, Principles of Nucleic Acid Structure, Springer-Verlag ed., 1984). As such chemically modified nucleotides present in the siNA molecules of the invention. preferably in the antisense strand of the siNA molecules of the invention, but also optionally in the sense and/or both antisense and sense strands, are resistant to nuclease degradation while at the same time maintaining the capacity to mediate RNAi. Nonlimiting examples of nucleotides having a northern configuration include locked nucleic acid (LNA) nucleotides (e.g., 2'-O, 4'-C-methylene-(D-ribofuranosyl) nucleotides); 2'methoxyethoxy (MOE) nucleotides; 2'-methyl-thio-ethyl, 2'-deoxy-2'-fluoro nucleotides, 2'-deoxy-2'-chloro nucleotides, 2'-azido nucleotides, and 2'-O-methyl nucleotides.

In one embodiment, the sense strand of a double stranded siNA molecule of the invention comprises a terminal cap moiety, (see for example Figure 10) such as an inverted deoxyabaisc moiety, at the 3'-end, 5'-end, or both 3' and 5'-ends of the sense strand.

In one embodiment, the invention features a chemically-modified short interfering nucleic acid molecule (siNA) capable of mediating RNA interference (RNAi) against a target polynucleotide (e.g., DNA or RNA) inside a cell or reconstituted in vitro system, wherein the chemical modification comprises a conjugate covalently attached to the chemically-modified siNA molecule. Non-limiting exampless of conjugates contemplated by the invention include conjugates and ligands described in Vargeese et al., USSN 10/427,160, filed April 30, 2003, incorporated by reference herein in its entirety, including the drawings. In another embodiment, the conjugate is covalently

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attached to the chemically-modified siNA molecule via a biodegradable linker. In one embodiment, the conjugate molecule is attached at the 3'-end of either the sense strand, the antisense strand, or both strands of the chemically-modified siNA molecule. In another embodiment, the conjugate molecule is attached at the 5'-end of either the sense strand, the antisense strand, or both strands of the chemically-modified siNA molecule. In yet another embodiment, the conjugate molecule is attached both the 3'-end and 5'-end of either the sense strand, the antisense strand, or both strands of the chemicallymodified siNA molecule, or any combination thereof. In one embodiment, a conjugate molecule of the invention comprises a molecule that facilitates delivery of a chemicallymodified siNA molecule into a biological system, such as a cell. In another embodiment, the conjugate molecule attached to the chemically-modified siNA molecule is a polyethylene glycol, human serum albumin, or a ligand for a cellular receptor that can mediate cellular uptake. Examples of specific conjugate molecules contemplated by the instant invention that can be attached to chemically-modified siNA molecules are described in Vargeese et al., U.S. Serial No. 10/201,394, filed July 22, 2002 incorporated by reference herein. The type of conjugates used and the extent of conjugation of siNA molecules of the invention can be evaluated for improved pharmacokinetic profiles, bioavailability, and/or stability of siNA constructs while at the same time maintaining the ability of the siNA to mediate RNAi activity. As such, one skilled in the art can screen siNA constructs that are modified with various conjugates to determine whether the siNA conjugate complex possesses improved properties while maintaining the ability to mediate RNAi, for example in animal models as are generally known in the art.

In one embodiment, the invention features a short interfering nucleic acid (siNA) molecule of the invention, wherein the siNA further comprises a nucleotide, non-nucleotide, or mixed nucleotide/non-nucleotide linker that joins the sense region of the siNA to the antisense region of the siNA. In one embodiment, a nucleotide linker of the invention can be a linker of ≥ 2 nucleotides in length, for example about 3, 4, 5, 6, 7, 8, 9, or 10 nucleotides in length. In another embodiment, the nucleotide linker can be a nucleic acid aptamer. By "aptamer" or "nucleic acid aptamer" as used herein is meant a nucleic acid molecule that binds specifically to a target molecule wherein the nucleic acid molecule has sequence that comprises a sequence recognized by the target molecule in its natural setting. Alternately, an aptamer can be a nucleic acid molecule that binds to

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a target molecule where the target molecule does not naturally bind to a nucleic acid. The target molecule can be any molecule of interest. For example, the aptamer can be used to bind to a ligand-binding domain of a protein, thereby preventing interaction of the naturally occurring ligand with the protein. This is a non-limiting example and those in the art will recognize that other embodiments can be readily generated using techniques generally known in the art. (See, for example, Gold et al., 1995, Annu. Rev. Biochem., 64, 763; Brody and Gold, 2000, J. Biotechnol., 74, 5; Sun, 2000, Curr. Opirs. Mol. Ther., 2, 100; Kusser, 2000, J. Biotechnol., 74, 27; Hermann and Patel, 2000, Science, 287, 820; and Jayasena, 1999, Clinical Chemistry, 45, 1628.)

In yet another embodiment, a non-nucleotide linker of the invention comprises abasic nucleotide, polyether, polyamine, polyamide, peptide, carbohydrate, lipid, polyhydrocarbon, or other polymeric compounds (e.g. polyethylene glycols such as those having between 2 and 100 ethylene glycol units). Specific examples include those described by Seela and Kaiser, Nucleic Acids Res. 1990, 18:6353 and Nucleic Acids Res. 1987, 15:3113; Cload and Schepartz, J. Am. Chem. Soc. 1991, 113:6324; Richardson and Schepartz, J. Am. Chem. Soc. 1991, 113:5109; Ma et al., Nucleic Acids Res. 1993, 21:2585 and Biochemistry 1993, 32:1751; Durand et al., Nucleic Acids Res. 1990, 18:6353; McCurdy et al., Nucleosides & Nucleotides 1991, 10:287; Jschke et al., Tetrahedron Lett. 1993, 34:301; Ono et al., Biochemistry 1991, 30:9914; Arnold et al., International Publication No. WO 89/02439; Usman et al., International Publication No. WO 95/06731; Dudycz et al., International Publication No. WO 95/11910 and Ferentz and Verdine, J. Am. Chem. Soc. 1991, 113:4000, all hereby incorporated by reference herein. A "non-nucleotide" further means any group or compound that can be incorporated into a nucleic acid chain in the place of one or more nucleotide units, including either sugar and/or phosphate substitutions, and allows the remaining bases to exhibit their enzymatic activity. The group or compound can be abasic in that it does not contain a commonly recognized nucleotide base, such as adenosine, guanine, cytosine, uracil or thymine, for example at the C1 position of the sugar.

In one embodiment, the invention features a short interfering nucleic acid (siNA) molecule capable of mediating RNA interference (RNAi) inside a cell or reconstituted in vitro system, wherein one or both strands of the siNA molecule that are assembled from

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two separate oligonucleotides do not comprise any ribonucleotides. For example, a siNA molecule can be assembled from a single oligoneuleotide where the sense and antisense regions of the siNA comprise separate oligonucleotides that do not have any ribonucleotides (e.g., nucleotides having a 2'-OH group) present in the oligonucleotides. In another example, a siNA molecule can be assembled from a single oligonculeotide where the sense and antisense regions of the siNA are linked or circularized by a nucleotide or non-nucleotide linker as described herein, wherein the oligonucleotide does not have any ribonucleotides (e.g., nucleotides having a 2'-OH group) present in the oligonucleotide. Applicant has surprisingly found that the presense of ribonucleotides (e.g., nucleotides having a 2'-hydroxyl group) within the siNA molecule is not required or essential to support RNAi activity. As such, in one embodiment, all positions within the siNA can include chemically modified nucleotides and/or non-nucleotides such as nucleotides and or non-nucleotides having Formula I, II, III, IV, V, VI, or VII or any combination thereof to the extent that the ability of the siNA molecule to support RNAi activity in a cell is maintained.

In one embodiment, a siNA molecule of the invention is a single stranded siNA molecule that mediates RNAi activity in a cell or reconstituted in vitro system comprising a single stranded polymucleotide having complementarity to a target nucleic acid sequence. In another embodiment, the single stranded siNA molecule of the invention comprises a 5'-terminal phosphate group. In another embodiment, the single stranded siNA molecule of the invention comprises a 5'-terminal phosphate group (e.g., a 2',3'-cyclic phosphate). In another embodiment, the single stranded siNA molecule of the invention comprises about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides. In yet another embodiment, the single stranded siNA molecule of the invention comprises one or more chemically modified nucleotides or non-nucleotides described herein. For example, all the positions within the siNA molecule can include chemically-modified nucleotides such as nucleotides having any of Formulae L-VII, or any combination thereof to the extent that the ability of the siNA molecule to support RNAi activity in a cell is maintained.

In one embodiment, a siNA molecule of the invention is a single stranded siNA molecule that mediates RNAi activity in a cell or reconstituted in vitro system comprising a single stranded polynucleotide having complementarity to a target nucleic acid sequence, wherein one or more pyrimidine nucleotides present in the siNA are 2'-5 deoxy-2'-fluoro pyrimidine nucleotides (e.g., wherein all pyrimidine nucleotides are 2'deoxy-2'-fluoro pyrimidine nucleotides or alternately a plurality of pyrimidine nucleotides are 2'-deoxy-2'-fluoro pyrimidine nucleotides), and wherein any purine nucleotides present in the antisense region are 2'-O-methyl purine nucleotides (e.g., wherein all purine nucleotides are 2'-O-methyl purine nucleotides or alternately a plurality of purine nucleotides are 2'-O-methyl purine nucleotides), and a terminal cap modification, such as any modification described herein or shown in Figure 10, that is optionally present at the 3'-end, the 5'-end, or both of the 3' and 5'-ends of the antisense sequence. The siNA optionally further comprises about 1 to about 4 or more (e.g., about 1, 2, 3, 4 or more) terminal 2'-deoxynucleotides at the 3'-end of the siNA molecule, wherein the terminal nucleotides can further comprise one or more (e.g., 1, 2, 3, 4 or more) phosphorothioate, phosphonoacetate, and/or thiophosphonoacetate internucleotide linkages, and wherein the siNA optionally further comprises a terminal phosphate group, such as a 5'-terminal phosphate group. In any of these embodiments, any purine nucleotides present in the antisense region are alternatively 2'-deoxy purine nucleotides (e.g., wherein all purine nucleotides are 2'-deoxy purine nucleotides or alternately a plurality of purine nucleotides are 2'-deoxy purine nucleotides). Also, in any of these embodiments, any purine nucleotides present in the siNA (i.e., purine nucleotides present in the sense and/or antisense region) can alternatively be locked nucleic acid (LNA) nucleotides (e.g., wherein all purine nucleotides are LNA nucleotides or alternately a plurality of purine nucleotides are LNA nucleotides). Also, in any of these embodiments, any purine nucleotides present in the siNA are alternatively 2'methoxyethyl purine nucleotides (e.g., wherein all purine nucleotides are 2'methoxyethyl purine nucleotides or alternately a plurality of purine nucleotides are 2'methoxyethyl purine nucleotides). In another embodiment, any modified nucleotides present in the single stranded siNA molecules of the invention comprise modified 30 nucleotides having properties or characteristics similar to naturally occurring ribonucleotides. For example, the invention features siNA molecules including modified

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nucleotides having a Northern conformation (e.g., Northern pseudorotation cycle, see for example Saenger, *Principles of Nucleic Acid Structure*, Springer-Verlag ed., 1984). As such, chemically modified nucleotides present in the single stranded siNA molecules of the invention are preferably resistant to nuclease degradation while at the same time maintaining the capacity to mediate RNAi.

In one embodiment, a siNA molecule of the invention comprises chemically modified nucleotides or non-nucleotides (e.g., having any of Formulae I-VII, such as 2'deoxy, 2'-deoxy-2'-fluoro, or 2'-O-methyl nucleotides) at alternating positions within one or more strands or regions of the siNA molecule. For example, such chemical modifications can be introduced at every other position of a RNA based siNA molecule, starting at either the first or second nucleotide from the 3'-end or 5'-end of the siNA. In a non-limiting example, a double stranded siNA molecule of the invention in which each strand of the siNA is 21 nucleotides in length is featured wherein positions 1, 3, 5, 7, 9, 11, 13, 15, 17, 19 and 21 of each strand are chemically modified (e.g., with compounds having any of Formulae 1-VII, such as such as 2'-deoxy, 2'-deoxy-2'-fluoro, or 2'-Omethyl nucleotides). In another non-limiting example, a double stranded siNA molecule of the invention in which each strand of the siNA is 21 nucleotides in length is featured wherein positions 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20 of each strand are chemically modified (e.g., with compounds having any of Formulae 1-VII, such as such as 2'-deoxy, 2'-deoxy-2'-fluoro, or 2'-O-methyl nucleotides). Such siNA molecules can further comprise terminal cap moieties and/or backbone modifications as described herein.

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In one embodiment, the invention features a method for modulating the expression of a target gene within a cell comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene; and (b) introducing the siNA molecule into a cell under conditions suitable to modulate the expression of the target gene in the cell.

In one embodiment, the invention features a method for modulating the expression of a target gene within a cell comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene and wherein the sense

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suand sequence of the SINA comprises a sequence identical or substantially similar to the sequence of the target RNA; and (b) introducing the siNA molecule into a cell under conditions suitable to modulate the expression of the target gene in the cell.

In another embodiment, the invention features a method for modulating the expression of more than one target gene within a cell comprising: (a) synthesizing siNA molecules of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target genes; and (b) introducing the siNA molecules into a cell under conditions suitable to modulate the expression of the target genes in the cell.

In another embodiment, the invention features a method for modulating the expression of two or more target genes within a cell comprising: (a) synthesizing one or more siNA molecules of the invention, which can be chemically-modified, wherein the siNA strands comprise sequences complementary to RNA of the target genes and wherein the sense strand sequences of the siNAs comprise sequences identical or substantially similar to the sequences of the target RNAs; and (b) introducing the siNA molecules into a cell under conditions suitable to modulate the expression of the target genes in the cell.

In another embodiment, the invention features a method for modulating the expression of more than one target gene within a cell comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene and wherein the sense strand sequence of the siNA comprises a sequence identical or substantially similar to the sequences of the target RNAs; and (b) introducing the siNA molecule into a cell under conditions suitable to modulate the expression of the target genes in the cell.

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In one embodiment, siNA molecules of the invention are used as reagents in ex vivo applications. For example, siNA reagents are introduced into tissue or cells that are transplanted into a subject for therapeutic effect. The cells and/or tissue can be derived from an organism or subject that later receives the explant, or can be derived from another organism or subject prior to transplantation. The siNA molecules can be used to

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modulate the expression of one or more target genes in the cells or tissue, such that the cells or tissue obtain a desired phenotype or are able to perform a function when transplanted in vivo. In one embodiment, certain target cells from a patient are extracted. These extracted cells are contacted with siNAs targeting a specific nucleotide sequence 5 within the cells under conditions suitable for untake of the siNAs by these cells (e.g. using delivery reagents such as cationic lipids, liposomes and the like or using techniques such as electroporation to facilitate the delivery of siNAs into cells). The cells are then reintroduced back into the same patient or other patients. Ira one embodiment, the invention features a method of modulating the expression of a target gene in a tissue explant comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene; and (b) introducing the siNA molecule into a cell of the tissue explant derived from a particular organism under cornditions suitable to modulate the expression of the target gene in the tissue explant. In another embodiment, the method further comprises introducing the tissue explant back into the organism the tissue was derived from or into another organism under conditions suitable to modulate the expression of the target gene in that organism.

In one embodiment, the invention features a method of modulating the expression of a target gene in a tissue explant comprising; (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene and wherein the sense strand sequence of the siNA comprises a sequence identical or substantially similar to the sequence of the target RNA; and (b) introducing the siNA molecule into a cell of the tissue explant derived from a particular organism under conditions suitable to modulate the expression of the gene in the tissue explant. In another embodiment, the method further comprises introducing the tissue explant back into the organism the tissue was derived from or into another organism under conditions suitable to modulate the expression of the target gene in that organism.

In another embodiment, the invention features a method of modulating the expression of more than one target gene in a tissue explant comprising: (a) synthesizing siNA molecules of the invention, which can be chemically-modified, wherein one of the

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siNA strands comprises a sequence complementary to RNA of the target genes; and (b) introducing the siNA molecules into a cell of the tissue explant derived from a particular organism under conditions suitable to modulate the expression of the target genes in the tissue explant. In another embodiment, the method further comprises introducing the tissue explant back into the organism the tissue was derived from or into another organism under conditions suitable to modulate the expression of the target genes in that organism.

In one embodiment, the invention features a method of modulating the expression of a target gene in a subject or organism comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target gene; and (b) introducing the siNA molecule into the subject or organism under conditions suitable to modulate the expression of the target gene in the subject or organism. The level of protein or RNA can be determined using various methods well-known in the art.

In another embodiment, the invention features a method of modulating the expression of more than one target gene in a subject or organism comprising: (a) synthesizing siNA molecules of the invention, which can be chemically-modified, wherein one of the siNA strands comprises a sequence complementary to RNA of the target genes; and (b) introducing the siNA molecules into the subject or organism under conditions suitable to modulate the expression of the target genes in the subject or organism. The level of protein or RNA can be determined as is known in the art.

In one embodiment, the invention features a method for modulating the expression of a target gene within a cell comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein the siNA comprises a single stranded sequence having complementarity to RNA of the target gene; and (b) introducing the siNA molecule into a cell under conditions suitable to modulate the expression of the target gene in the cell.

In another embodiment, the invention features a method for modulating the expression of more than one target gene within a cell comprising: (a) synthesizing siNA molecules of the invention, which can be chemically-modified, wherein the siNA

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comprises a single stranded sequence having complementarity to RNA of the target gene; and (b) contacting the cell in vitro or in vivo with the siNA molecule under conditions suitable to modulate the expression of the target genes in the cell.

In one embodiment, the invention features a method of modulating the expression of a target gene in a tissue explant comprising: (a) synthesizing a siNA molecule of the 5 invention, which can be chemically-modified, wherein the siNA comprises a single stranded sequence having complementarity to RNA of the gene; and (b) contacting a cell of the tissue explant derived from a particular subject or organism with the siNA molecule under conditions suitable to modulate the expression of the target gene in the tissue explant. In another embodiment, the method further comprises introducing the tissue explant back into the subject or organism the tissue was derived from or into another subject or organism under conditions suitable to modulate the expression of the target gene in that subject or organism.

In another embodiment, the invention features a method of modulating the expression of more than one target gene in a tissue explant comprising: (a) synthesizing 15 siNA molecules of the invention, which can be chemically-modified, wherein the siNA comprises a single stranded sequence having complementarity to RNA of the target gene; and (b) introducing the siNA molecules into a cell of the tissue explant derived from a particular subject or organism under conditions suitable to modulate the expression of the target genes in the tissue explant. In another embodiment, the method further comprises introducing the tissue explant back into the subject or organism the tissue was derived from or into another subject or organism under conditions suitable to modulate the expression of the target genes in that subject or organism.

In one embodiment, the invention features a method of modulating the expression of a target gene in a subject or organism comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein the siNA comprises a single stranded sequence having complementarity to RNA of the target gene; and (b) introducing the siNA molecule into the subject or organism under conditions suitable to modulate the expression of the target gene in the subject or organism.

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In another embodiment, the invention features a method of modulating the expression of more than one target gene in a subject or organism comprising: (a) synthesizing siNA molecules of the invention, which can be chemically-modified, wherein the siNA comprises a single stranded sequence having complementarity to RNA of the target gene; and (b) introducing the siNA molecules into the subject or organism under conditions suitable to modulate the expression of the target genes in the subject or organism.

In one embodiment, the invention features a method of modulating the expression of a target gene in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of the target gene in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a disease, disorder, trait or condition related to gene expression in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of the target gene in the subject or organism. The reduction of gene expression and thus reduction in the level of the respective protein/RNA relieves, to some extent, the symptoms of the disease, disorder, trait or condition.

In one embodiment, the invention features a method for treating or preventing cancer in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of cancer in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a proliferative disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the proliferative disease, disorder, trait or condition in the subject or organism.

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In one embodiment, the invention features a method for treating or preventing transplant and/or tissue rejection (allograft rejection) in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with transplant and/or tissue rejection (allograft rejection) in the subject or organism.

In one embodiment, the invention features a method for treating or preventing an autoimmune disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the autoimmune disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing an infectious disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the infectious disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing an age-related disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the age-related disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a neurologic or neurodegenerative disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the neurologic or neurodegenerative disease, disorder, trait or condition in the subject or organism.

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In one embodiment, the invention features a method for treating or preventing a metabolic disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the metabolic disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing an cardiovascular disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the cardiovascular disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a respiratory disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the respiratory disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing an ocular disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the ocular disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a dermatological disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the dermatological disease, disorder, trait or condition in the subject or organism.

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In one embodiment, the invention features a method for treating or preventing a disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a liver disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the liver disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a kidney disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the kidney disease, disorder, trait or condition in the subject or organism.

In one embodiment, the invention features a method for treating or preventing a bladder disease, disorder, trait or condition in a subject or organism comprising contacting the subject or organism with a siNA molecule of the invention under conditions suitable to modulate the expression of a target gene associated with the maintenance or development of the bladder disease, disorder, trait or condition in the subject or organism.

In another embodiment, the invention features a method of modulating the expression of more than one target gene in a subject or organism comprising contacting the subject or organism with one or more siNA molecules of the invention under conditions suitable to modulate the expression of the genes in the subject or organism.

The siNA molecules of the invention can be designed to down regulate or inhibit target gene expression through RNAi targeting of a variety of RNA molecules. In one embodiment, the siNA molecules of the invention are used to target various RNAs corresponding to a target gene. Non-limiting examples of such RNAs include messenger

RNA (mRNA), alternate RNA splice variants of target gene(s), post-transcriptionally modified RNA of target gene(s), pre-mRNA of target gene(s), and/or RNA templates. If alternate splicing produces a family of transcripts that are distinguished by usage of appropriate exons, the instant invention can be used to inhibit gene expression through 5 the appropriate exons to specifically inhibit or to distinguish among the functions of gene family members. For example, a protein that contains an alternatively spliced transmembrane domain can be expressed in both membrane bound and secreted forms. Use of the invention to target the exon containing the transmembrane domain can be used to determine the functional consequences of pharmaceutical targeting of membrane 10 bound as opposed to the secreted form of the protein. Non-limiting examples of applications of the invention relating to targeting these RNA molecules include therapeutic pharmaceutical applications, pharmaceutical discovery applications, molecular diagnostic and gene function applications, and gene mapping, for example using single nucleotide polymorphism mapping with siNA molecules of the invention. Such applications can be implemented using known gene sequences or from partial sequences available from an expressed sequence tag (EST).

In another embodiment, the siNA molecules of the invention are used to target conserved sequences corresponding to a target gene family or target gene families. As such, siNA molecules targeting multiple gene targets can provide increased therap-cutic effect. In addition, siNA can be used to characterize pathways of gene function in a variety of applications. For example, the present invention can be used to inhibit the activity of target gene(s) in a pathway to determine the function of uncharacterized gene(s) in gene function analysis, mRNA function analysis, or translational analysis. The invention can be used to determine potential target gene pathways involved in various diseases and conditions toward pharmaceutical development. The invention can be used to understand pathways of gene expression involved in diseases, traits, disorders, and/or conditions described herein or otherwise known in the art.

In one embodiment, siNA molecule(s) and/or methods of the invention are used to down regulate the expression of gene(s) that encode RNA referred to by Genbank Accession, for example, target genes encoding RNA sequence(s) referred to hereizn by Genbank Accession number, for example, Genbank Accession Nos. shown in Table I.

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In one embodiment, the invention features a method comprising: (a) generating a library of siNA constructs having a predetermined complexity; and (b) assaying the siNA constructs of (a) above, under conditions suitable to determine RNAi target sites within the target RNA sequence. In one embodiment, the siNA molecules of (a) have strands of a fixed length, for example, about 23 nucleotides in length. In another embodiment, the siNA molecules of (a) are of differing length, for example having strands of about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides in length. In one embodiment, the assay can comprise a reconstituted in vitro siNA assay as described herein. In another embodiment, the assay can comprise a cell culture system in which target RNA is expressed. In another embodiment, fragments of target RNA are analyzed for detectable levels of cleavage, for example by gel electrophoresis, northern blot analysis, or RNAse protection assays, to determine the most suitable target site(s) within the target RNA sequence can be obtained as is known in the art, for example, by cloning and/or transcription for the vitro systems, and by cellular expression in the vitro systems.

In one embodiment, the invention features a method comprising: (a) generating a randomized library of siNA constructs having a predetermined complexity, such as of 4N, where N represents the number of base paired nucleotides in each of the siNA construct strands (eg. for a siNA construct having 21 nucleotide sense and antisense strands with 19 base pairs, the complexity would be 419); and (b) assaying the siNA constructs of (a) above, under conditions suitable to determine RNAi target sites within the target RNA sequence. In another embodiment, the siNA molecules of (a) have strands of a fixed length, for example about 23 nucleotides in length. In yet another embodiment, the siNA molecules of (a) are of differing length, for example having strands of about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides in length. In one embodiment, the assay can comprise a reconstituted in vitro siNA assay as described in Example 6 herein. In another embodiment, the assay can comprise a cell culture system in which target RNA is expressed. In another embodiment, fragments of target RNA are analyzed for detectable levels of cleavage, for example, by gel electrophoresis, northern blot analysis, or RNAse protection assays, to determine the most suitable target site(s) within the target target RNA sequence. The target target

RNA sequence can be obtained as is known in the art, for example, by cloning and/or transcription for in vitro systems, and by cellular expression in in vivo systems.

In another embodiment, the invention features a method comprising: (a) analyzing the sequence of a RNA target encoded by a target gene; (b) synthesizing one or more sets 5 of siNA molecules having sequence complementary to one or more regions of the RNA of (a); and (c) assaying the siNA molecules of (b) under conditions suitable to determine RNAi targets within the target RNA sequence. In one embodiment, the siNA molecules of (b) have strands of a fixed length, for example about 23 nucleotides in length. In another embodiment, the siNA molecules of (b) are of differing length, for example 10 having strands of about 15 to about 30 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) nucleotides in length. In one embodiment, the assay can comprise a reconstituted in vitro siNA assay as described herein. In another embodiment, the assay can comprise a cell culture system in which target RNA is expressed. Fragments of target RNA are analyzed for detectable levels of cleavage, for 15 example by gel electrophoresis, northern blot analysis, or RNAse protection assays, to determine the most suitable target site(s) within the target RNA sequence. The target RNA sequence can be obtained as is known in the art, for example, by cloning and/or transcription for in vitro systems, and by expression in in vivo systems.

By "target site" is meant a sequence within a target RNA that is "targeted" for cleavage mediated by a siNA construct which contains sequences within its antisense region that are complementary to the target sequence.

By "detectable level of cleavage" is meant cleavage of target RNA (and formation of cleaved product RNAs) to an extent sufficient to discern cleavage products above the background of RNAs produced by random degradation of the target RNA. Production of cleavage products from 1-5% of the target RNA is sufficient to detect above the background for most methods of detection.

In one embodiment, the invention features a composition comprising a siNA molecule of the invention, which can be chemically-modified, in a pharmaceutically acceptable carrier or diluent. In another embodiment, the invention features a pharmaceutical composition comprising siNA molecules of the invention, which can be

chemically-modified, targeting one or more genes in a pharmaceutically acceptable carrier or diluent. In another embodiment, the invention features a method for diagnosing a disease or condition in a subject comprising administering to the subject a composition of the invention under conditions suitable for the diagnosis of the disease or condition in the subject. In another embodiment, the invention features a method for treating or preventing a disease or condition in a subject, comprising administering to the subject a composition of the invention under conditions suitable for the treatment or prevention of the disease or condition in the subject, alone or in conjunction with one or more other therapeutic compounds. In yet another embodiment, the invention features a method for treating or preventing diseases, traits, disorders, and/or conditions in a subject or organism comprising administering to the subject a composition of the invention under conditions suitable for the treatment or prevention of the disease, trait, disorder, and/or condition in the subject or organism.

In another embodiment, the invention features a method for validating a gene target, comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands includes a sequence complementary to RNA of a target gene; (b) introducing the siNA molecule into a cell, tissue, subject, or organism under conditions suitable for modulating expression of the target gene in the cell, tissue, subject, or organism; and (c) determining the function of the target gene by assaying for any phenotypic change in the cell, tissue, subject, or organism.

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In another embodiment, the invention features a method for validating a gene target comprising: (a) synthesizing a siNA molecule of the invention, which can be chemically-modified, wherein one of the siNA strands includes a sequence complementary to RNA of a target gene; (b) introducing the siNA molecule into a biological system under conditions suitable for modulating expression of the target gene in the biological system; and (c) determining the function of the gene by assaying for any phenotypic change in the biological system.

By "biological system" is meant, material, in a purified or unpurified form, from biological sources, including but not limited to human or animal, wherein the system comprises the components required for RNAi activity. The term "biological system"

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includes, for example, a cell, tissue, subject, or organism, or extract thereof. The term biological system also includes reconstituted RNAi systems that can be used in an *in vitro* setting.

By "phenotypic change" is meant any detectable change to a cell that occurs in response to contact or treatment with a nucleic acid molecule of the invention (e.g., siNA). Such detectable changes include, but are not limited to, changes in shape, size, proliferation, motility, protein expression or RNA expression or other physical or chemical changes as can be assayed by methods known in the art. The detectable change can also include expression of reporter genes/molecules such as Green Florescent Protein (GFP) or various tags that are used to identify an expressed protein or any other cellular component that can be assayed.

In one embodiment, the invention features a kit containing a siNA molecule of the invention, which can be chemically-modified, that can be used to modulate the expression of a target gene in a biological system, including, for example, in a cell, tissue, subject, or organism. In another embodiment, the invention features a kit containing more than one siNA molecule of the invention, which can be chemically-modified, that can be used to modulate the expression of more than one target gene in a biological system, including, for example, in a cell, tissue, subject, or organism.

In one embodiment, the invention features a cell containing one or more siNA molecules of the invention, which can be chemically-modified. In another embodiment, the cell containing a siNA molecule of the invention is a mammalian cell. In yet another embodiment, the cell containing a siNA molecule of the invention is a human cell.

In one embodiment, the synthesis of a siNA molecule of the invention, which can be chemically-modified, comprises: (a) synthesis of two complementary strands of the siNA molecule; (b) annealing the two complementary strands together under conditions suitable to obtain a double-stranded siNA molecule. In another embodiment, synthesis of the two complementary strands of the siNA molecule is by solid phase oligonucleotide synthesis. In yet another embodiment, synthesis of the two complementary strands of the siNA molecule is by solid phase tandem oligonucleotide synthesis.

In one embodiment, the invention features a method for synthesizing a siNA duplex molecule comprising: (a) synthesizing a first oligonucleotide sequence strand of the siNA molecule, wherein the first oligonucleotide sequence strand comprises a cleavable linker molecule that can be used as a scaffold for the synthesis of the second oligonucleotide sequence strand of the siNA; (b) synthesizing the second oligonucleotide sequence strand of siNA on the scaffold of the first oligonucleotide sequence strand, wherein the second oligonucleotide sequence strand further comprises a chemical moiety than can be used to purify the siNA duplex; (c) cleaving the linker molecule of (a) under conditions suitable for the two siNA oligonucleotide strands to hybridize and form a stable duplex; and (d) purifying the siNA duplex utilizing the chemical moiety of the second oligonucleotide sequence strand. In one embodiment, cleavage of the linker molecule in (c) above takes place during deprotection of the oligonucleotide, for example, under hydrolysis conditions using an alkylamine base such as methylamine. In one embodiment, the method of synthesis comprises solid phase synthesis on a solid support such as controlled pore glass (CPG) or polystyrene, wherein the first sequence of (a) is synthesized on a cleavable linker, such as a succinyl linker, using the solid support as a scaffold. The cleavable linker in (a) used as a scaffold for synthesizing the second. strand can comprise similar reactivity as the solid support derivatized linker, such that cleavage of the solid support derivatized linker and the cleavable linker of (a) takes place concomitantly. In another embodiment, the chemical moiety of (b) that can be used to isolate the attached oligonucleotide sequence comprises a trityl group, for example a dimethoxytrityl group, which can be employed in a trityl-on synthesis strategy as described herein. In yet another embodiment, the chemical moiety, such as a dimethoxytrityl group, is removed during purification, for example, using acidic conditions.

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In a further embodiment, the method for siNA synthesis is a solution phase synthesis or hybrid phase synthesis wherein both strands of the siNA duplex are synthesized in tandem using a cleavable linker attached to the first sequence which acts a scaffold for synthesis of the second sequence. Cleavage of the linker under conditions suitable for hybridization of the separate siNA sequence strands results in formation of the double-stranded siNA molecule.

In another embodiment, the invention features a method for synthesizing a sina duplex molecule comprising: (a) synthesizing one oligonucleotide sequence strand of the siNA molecule, wherein the sequence comprises a cleavable linker molecule that can be used as a scaffold for the synthesis of another oligonucleotide sequence; (b) synthesizing a second oligonucleotide sequence having complementarity to the first sequence strand on the scaffold of (a), wherein the second sequence comprises the other strand of the double-stranded siNA molecule and wherein the second sequence further comprises a chemical moiety than can be used to isolate the attached oligonucleotide sequence; (c) purifying the product of (b) utilizing the chemical moiety of the second oligonucleotide sequence strand under conditions suitable for isolating the full-length sequence comprising both siNA oligonucleotide strands connected by the cleavable linker and under conditions suitable for the two siNA oligonucleotide strands to hybridize and form a stable duplex. In one embodiment, cleavage of the linker molecule in (c) above takes place during deprotection of the oligonucleotide, for example, under hydrolysis conditions. In another embodiment, cleavage of the linker molecule in (c) above takes place after deprotection of the oligonucleotide. In another embodiment, the method of synthesis comprises solid phase synthesis on a solid support such as controlled pore glass (CPG) or polystyrene, wherein the first sequence of (a) is synthesized on a cleavable linker, such as a succinyl linker, using the solid support as a scaffold. The cleavable linker in (a) used as a scaffold for synthesizing the second strand can comprise similar reactivity or differing reactivity as the solid support derivatized linker, such that cleavage of the solid support derivatized linker and the cleavable linker of (a) takes place either concomitantly or sequentially. In one embodiment, the chemical moiety of (b) that can be used to isolate the attached oligonucleotide sequence comprises a trityl group, for example a dimethoxytrityl group.

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In another embodiment, the invention features a method for making a doublestranded siNA molecule in a single synthetic process comprising: (a) synthesizing an oligonucleotide having a first and a second sequence, wherein the first sequence is complementary to the second sequence, and the first oligonucleotide sequence is linked to the second sequence via a cleavable linker, and wherein a terminal 5'-protecting group, for example, a 5'-O-dimethoxytrityl group (5'-O-DMT) remains on the oligonucleotide having the second sequence; (b) deprotecting the oligonucleotide whereby the

deprotection results in the cleavage of the linker joining the two oligonucleotide sequences; and (c) purifying the product of (b) under conditions suitable for isolating the double-stranded siNA molecule, for example using a trityl-on synthesis strategy as described herein.

5 In another embodiment, the method of synthesis of siNA molecules of the invention comprises the teachings of Scaringe et al., US Patent Nos. 5,889,136; 6,008,400; and 6,111,086, incorporated by reference herein in their entirety.

In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct 10 comprises one or more chemical modifications, for example, one or more chemical modifications having any of Formulae I-VII or any combination thereof that increases the nuclease resistance of the siNA construct.

In another embodiment, the invention features a method for generating siNA molecules with increased nuclease resistance comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having increased nuclease resistance.

In another embodiment, the invention features a method for generating siNA molecules with improved toxicologic profiles (e.g., have attenuated or no immunstimulatory properties) comprising (a) introducing nucleotides having any of Formula I-VII (e.g., siNA motifs referred to in Table II) or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved toxicologic profiles.

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In another embodiment, the invention features a method for generating siNA molecules that do not stimulate an interferon response (e.g., no interferon response or 25 attenuated interferon response) in a cell, subject, or organism, comprising (a) introducing nucleotides having any of Formula I-VII (e.g., siNA motifs referred to in Table II) or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules that do not stimulate an interferon response.

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By "improved toxicologic profile", is meant that the chemically modified siNA construct exhibits decreased toxicity in a cell, subject, or organism compared to an unmodified siNA or siNA molecule having fewer modifications or modifications that are less effective in imparting improved toxicology. In a non-limiting example, siNA molecules with improved toxicologic profiles are associated with a decreased or attenuated immunostimulatory response in a cell, subject, or organism compared to an unmodified siNA or siNA molecule having fewer modifications or modifications that are less effective in imparting improved toxicology. In one embodiment, a siNA molecule with an improved toxicological profile comprises no ribonucleotides. embodiment, a siNA molecule with an improved toxicological profile comprises less than 5 ribonucleotides (e.g., 1, 2, 3, or 4 ribonucleotides). In one embodiment, a siNA molecule with an improved toxicological profile comprises Stab 7, Stab 8, Stab 11, Stab 12. Stab 13. Stab 16. Stab 17. Stab 18. Stab 19. Stab 20. Stab 23. Stab 24. Stab 25. Stab 26, Stab 27, Stab 28, Stab 29, Stab 30, Stab 31, Stab 32 or any combination thereof (see Table II). In one embodiment, the level of immunostimulatory response associated with a given siNA molecule can be measured as is known in the art, for example by determining the level of PKR/interferon response, proliferation, B-cell activation, and/or cytokine production in assays to quantitate the immunostimulatory response of particular siNA molecules (see, for example, Leifer et al., 2003, J Immunother. 26, 313-9; and U.S. Patent No. 5968909, incorporated in its entirety by reference).

In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that modulates the binding affinity between the sense and antisense strands of the siNA construct.

In another embodiment, the invention features a method for generating siNA molecules with increased binding affinity between the sense and antisense strands of the siNA molecule comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having increased binding affinity between the sense and antisense strands of the siNA molecule.

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In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that modulates the binding affinity between the antisense strand of the siNA construct and a complementary target RNA sequence within a cell.

In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that modulates the binding affinity between the antisense strand of the siNA construct and a complementary target DNA sequence within a cell.

In another embodiment, the invention features a method for generating siNA molecules with increased binding affinity between the antisense strand of the siNA molecule and a complementary target RNA sequence comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having increased binding affinity between the antisense strand of the siNA molecule and a complementary target RNA sequence.

In another embodiment, the invention features a method for generating siNA molecules with increased binding affinity between the antisense strand of the siNA molecule and a complementary target DNA sequence comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having increased binding affinity between the antisense strand of the siNA molecule and a complementary target DNA sequence.

In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that modulate the polymenase activity of a cellular polymenase capable of generating additional endogenous siNA molecules having sequence homology to the chemically-modified siNA construct.

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In another embodiment, the invention features a method for generating siNA molecules capable of mediating increased polymerase activity of a cellular polymerase capable of generating additional endogenous siNA molecules having sequence homology to a chemically-modified siNA molecule comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules capable of mediating increased polymerase activity of a cellular polymerase capable of generating additional endogenous siNA molecules having sequence homology to the chemically-modified siNA molecule.

In one embodiment, the invention features chemically-modified siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA) in a cell, wherein the chemical modifications do not significantly effect the interaction of siNA with a target RNA molecule, DNA molecule and/or proteins or other factors that are essential for RNAi in a manner that would decrease the efficacy of RNAi mediated by such siNA constructs.

In another embodiment, the invention features a method for generating siNA molecules with improved RNAi activity against a target polynucleotide (e.g., DNA or RNA) comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved RNAi activity.

In yet another embodiment, the invention features a method for generating siNA molecules with improved RNAi activity against a target RNA comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved RNAi activity against the target RNA.

In yet another embodiment, the invention features a method for generating siNA molecules with improved RNAi activity against a target DNA comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA

molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved RNAi activity against the target DNA.

In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that modulates the cellular uptake of the siNA construct.

In another embodiment, the invention features a method for generating siNA molecules against a target polynucleotide (e.g., DNA or RNA) with improved cellular uptake comprising (a) introducing nucleotides having any of Formula I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved cellular uptake.

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In one embodiment, the invention features siNA constructs that mediate RNAi against a target polynucleotide (e.g., DNA or RNA), wherein the siNA construct comprises one or more chemical modifications described herein that increases the bioavailability of the siNA construct, for example, by attaching polymeric conjugates such as polyethyleneglycol or equivalent conjugates that improve the pharmacokinetics of the siNA construct, or by attaching conjugates that target specific tissue types or cell types In Vivo. Non-limiting examples of such conjugates are described in Vargeese et al., U.S. Serial No. 10/201.394 incorporated by reference herein.

In one embodiment, the invention features a method for generating siNA molecules of the invention with improved bioavailability comprising (a) introducing a conjugate into the structure of a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved bioavailability. Such conjugates can include ligands for cellular receptors, such as peptides derived from naturally occurring protein ligands; protein localization sequences, including cellular ZIP code sequences; antibodies; nucleic acid aptamers; vitamins and other co-factors, such as folate and N-acetylgalactosamine; polymers, such as polyethyleneglycol (PEG); phospholipids; cholesterol; polyamines, such as spermine or spermidine; and others.

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In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein said second sequence is chemically modified in a manner that it can no longer act as a guide sequence for efficiently mediating RNA interference and/or be recognized by cellular proteins that facilitate RNAi.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein the second sequence is designed or modified in a manner that prevents its entry into the RNAi pathway as a guide sequence or as a sequence that is complementary to a target nucleic acid (e.g., RNA) sequence. Such design or modifications are expected to enhance the activity of siNA and/or improve the specificity of siNA molecules of the invention. These modifications are also expected to minimize any off-target effects and/or associated toxicity.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein said second sequence is incapable of acting as a guide sequence for mediating RNA interference.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein said second sequence does not have a terminal 5'-hydroxyl (5'-OH) or 5'-phosphate group.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein said second sequence comprises a

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terminal cap moiety at the 5'-end of said second sequence. In one embodiment, the terminal cap moiety comprises an inverted abasic, inverted deoxy abasic, inverted muleotide moiety, a group shown in Figure 10, an alkyl or cycloalkyl group, a heterocycle, or any other group that prevents RNAi activity in which the second sequence serves as a guide sequence or template for RNAi.

In one embodiment, the invention features a double stranded short interfering nucleic acid (siNA) molecule that comprises a first nucleotide sequence complementary to a target RNA sequence or a portion thereof, and a second sequence having complementarity to said first sequence, wherein said second sequence comprises a terminal cap moiety at the 5'-end and 3'-end of said second sequence. In one embodiment, each terminal cap moiety individually comprises an inverted abasic, inverted deoxy abasic, inverted nucleotide moiety, a group shown in Figure 10, an alkyl or cycloalkyl group, a heterocycle, or any other group that prevents RNAi activity in which the second sequence serves as a guide sequence or template for RNAi.

In one embodiment, the invention features a method for generating siNA molecules of the invention with improved specificity for down regulating or inhibiting the expression of a target nucleic acid (e.g., a DNA or RNA such as a gene or its corresponding RNA), comprising (a) introducing one or more chemical modifications into the structure of a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved specificity. In another embodiment, the chemical modification used to improve specificity comprises terminal cap modifications at the 5'-end, 3'-end, or both 5' and 3'-ends of the siNA molecule. The terminal cap modifications can comprise, for example, structures shown in Figure 10 (e.g. inverted deoxyabasic moieties) or any other chemical modification that renders a portion of the siNA molecule (e.g. the sense strand) incapable of mediating RNA interference against an off target nucleic acid sequence. In a non-limiting example, a siNA molecule is designed such that only the antisense sequence of the siNA molecule can serve as a guide sequence for RISC mediated degradation of a corresponding target RNA sequence. This can be accomplished by rendering the sense sequence of the siNA inactive by introducing chemical modifications to the sense strand that preclude recognition of the sense strand as a guide sequence by RNAi machinery. In one

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embodiment, such chemical modifications comprise any chemical group at the 5'-end of the sense strand of the siNA, or any other group that serves to render the sense strand inactive as a guide sequence for mediating RNA interference. These modifications, for example, can result in a molecule where the 5'-end of the sense strand no longer has a free 5'-hydroxyl (5'-OH) or a free 5'-phosphate group (e.g., phosphate, diphosphate, triphosphate, cyclic phosphate etc.). Non-limiting examples of such siNA constructs are described herein, such as "Stab 9/10", "Stab 7/19", "Stab 7/19", "Stab 17/22", "Stab 23/24", "Stab 24/25", and "Stab 24/26" (e.g., any siNA having Stab 7, 9, 17, 23, or 24 sense strands) chemistries and variants thereof (see Table II) wherein the 5'-end and 3'-end of the sense strand of the siNA do not comprise a hydroxyl group or phosphate group.

In one embodiment, the invention features a method for generating siNA molecules of the invention with improved specificity for down regulating or inhibiting the expression of a target nucleic acid (e.g., a DNA or RNA such as a gene or its corresponding RNA), comprising introducing one or more chemical modifications into the structure of a siNA molecule that prevent a strand or portion of the siNA molecule from acting as a template or guide sequence for RNAi activity. In one embodiment, the inactive strand or sense region of the siNA molecule is the sense strand or sense region of the siNA molecule, i.e. the strand or region of the siNA that does not have complementarity to the target nucleic acid sequence. In one embodiment, such chemical modifications comprise any chemical group at the 5'-end of the sense strand or region of the siNA that does not comprise a 5'-hydroxyl (5'-OH) or 5'-phosphate group, or any other group that serves to render the sense strand or sense region inactive as a guide sequence for mediating RNA interference. Non-limiting examples of such siNA constructs are described herein, such as "Stab 9/10", "Stab 7/8", "Stab 7/19", "Stab 17/22", "Stab 23/24", "Stab 24/25", and "Stab 24/26" (e.g., any siNA having Stab 7, 9, 17, 23, or 24 sense strands) chemistries and variants thereof (see Table II) wherein the 5'-end and 3'-end of the sense strand of the siNA do not comprise a hydroxyl group or phosphate group.

In one embodiment, the invention features a method for screening siNA molecules that are active in mediating RNA interference against a target nucleic acid sequence

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comprising (a) generating a plurality of unmodified siNA molecules, (b) screening the siNA molecules of step (a) under conditions suitable for isolating siNA molecules that are active in mediating RNA interference against the target nucleic acid sequence, and (c) introducing chemical modifications (e.g. chemical modifications as described herein or as otherwise known in the art) into the active siNA molecules of (b). In one embodiment, the method further comprises re-screening the chemically modified siNA molecules of step (c) under conditions suitable for isolating chemically modified siNA molecules that are active in mediating RNA interference against the target nucleic acid sequence.

In one embodiment, the invention features a method for screening chemically modified sinA molecules that are active in mediating RNA interference against a target nucleic acid sequence comprising (a) generating a plurality of chemically modified sinA molecules (e.g. sinA molecules as described herein or as otherwise known in the arth, and (b) screening the sinA molecules of step (a) under conditions suitable for isolating chemically modified sinA molecules that are active in mediating RNA interference against the target nucleic acid sequence.

The term "ligand" refers to any compound or molecule, such as a drug, peptide, hormone, or neurotransmitter, that is capable of interacting with another compound, such as a receptor, either directly or indirectly. The receptor that interacts with a ligand can be present on the surface of a cell or can alternately be an intercellular receptor. Interaction of the ligand with the receptor can result in a biochemical reaction, or can simply be a physical interaction or association.

In another embodiment, the invention features a method for generating siNA molecules of the invention with improved bioavailability comprising (a) introducing an excipient formulation to a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved bioavailability. Such excipients include polymers such as cyclodextrins, lipids, cationic lipids, polyamines, phospholipids, nanoparticles, receptors, ligands, and others.

In another embodiment, the invention features a method for generating siNA molecules of the invention with improved bioavailability comprising (a) introducing

nucleotides having any of Formulae I-VII or any combination thereof into a siNA molecule, and (b) assaying the siNA molecule of step (a) under conditions suitable for isolating siNA molecules having improved bioavailability.

In another embodiment, polyethylene glycol (PEG) can be covalently attached to 5 siNA compounds of the present invention. The attached PEG can be any molecular weight, preferably from about 2,000 to about 50,000 daltons (Da).

The present invention can be used alone or as a component of a kit having at least one of the reagents necessary to carry out the *in vitro* or *in vivo* introduction of RNA to test samples and/or subjects. For example, preferred components of the kit include a siNA molecule of the invention and a vehicle that promotes introduction of the siNA into cells of interest as described herein (e.g., using lipids and other methods of transfection known in the art, see for example Beigelman et al, US 6,395,713). The kit can be used for target validation, such as in determining gene function and/or activity, or in drug optimization, and in drug discovery (see for example Usman et al., USSN 60/402,996). Such a kit can also include instructions to allow a user of the kit to practice the invention.

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The term "short interfering nucleic acid", "siNA", "short interfering RNA", "siRNA", "short interfering nucleic acid molecule", "short interfering oligonucleotide molecule", or "chemically-modified short interfering nucleic acid molecule" as used herein refers to any nucleic acid molecule capable of inhibiting or down regulating gene expression or viral replication, for example by mediating RNA interference "RNAi" or gene silencing in a sequence-specific manner; see for example Zamore et al., 2000, Cell, 101, 25-33; Bass, 2001, Nature, 411, 428-429; Elbashir et al., 2001, Nature, 411, 494-498; and Kreutzer et al., International PCT Publication No. WO 00/44895; Zernicka-Goetz et al., International PCT Publication No. WO 01/36646; Fire, International PCT Publication No. WO 99/32619; Plaetinck et al., International PCT Publication No. WO 25 00/01846; Mello and Fire, International PCT Publication No. WO 01/29058; Deschamps-Depaillette, International PCT Publication No. WO 99/07409; and Li et al., International PCT Publication No. WO 00/44914; Allshire, 2002, Science, 297, 1818-1819; Volpe et al., 2002, Science, 297, 1833-1837; Jenuwein, 2002, Science, 297, 2215-2218; and Hall et al., 2002, Science, 297, 2232-2237; Hutvagner and Zamore, 2002, Science, 297, 2056-60; McManus et al., 2002, RNA, 8, 842-850; Reinhart et al., 2002,

Gene & Dev., 16, 1616-1626; and Reinhart & Bartel, 2002, Science, 297, 1831). Non limiting examples of siNA molecules of the invention are shown in Figures 4-6 herein. For example the siNA can be a double-stranded polynucleotide molecule comprising self-complementary sense and antisense regions, wherein the antisense region comprises nucleotide sequence that is complementary to nucleotide sequence in a target nucleic acid molecule or a portion thereof and the sense region having nucleotide sequence corresponding to the target nucleic acid sequence or a portion thereof. The siNA can be assembled from two separate oligonucleotides, where one strand is the sense strand and the other is the antisense strand, wherein the antisense and sense strands are selfcomplementary (i.e. each strand comprises nucleotide sequence that is complementary to nucleotide sequence in the other strand; such as where the antisense strand and sense strand form a duplex or double stranded structure, for example wherein the double stranded region is about 15 to about 30, e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 or 30 base pairs; the antisense strand comprises nucleotide sequence that is complementary to nucleotide sequence in a target nucleic acid molecule or a portion thereof and the sense strand comprises nucleotide sequence corresponding to the target nucleic acid sequence or a portion thereof (e.g., about 15 to about 25 or more nucleotides of the siNA molecule are complementary to the target nucleic acid or a portion thereof). Alternatively, the siNA is assembled from a single oligonucleotide, where the self-complementary sense and antisense regions of the siNA are linked by means of a nucleic acid based or non-nucleic acid-based linker(s). The siNA can be a polynucleotide with a duplex, asymmetric duplex, hairpin or asymmetric hairpin secondary structure, having self-complementary sense and antisense regions, wherein the antisense region comprises nucleotide sequence that is complementary to nucleotide sequence in a separate target nucleic acid molecule or a portion thereof and the sense region having nucleotide sequence corresponding to the target nucleic acid sequence or a portion thereof. The siNA can be a circular single-stranded polynucleotide having two or more loop structures and a stem comprising self-complementary sense and antisense regions, wherein the antisense region comprises nucleotide sequence that is complementary to nucleotide sequence in a target nucleic acid molecule or a portion thereof and the sense region having nucleotide sequence corresponding to the target nucleic acid sequence or a portion thereof, and wherein the circular polynucleotide can

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be processed either in vivo or in vitro to generate an active siNA molecule capable of mediating RNAi. The siNA can also comprise a single stranded polynucleotide having nucleotide sequence complementary to nucleotide sequence in a target nucleic acid molecule or a portion thereof (for example, where such siNA molecule does not require the presence within the siNA molecule of nucleotide sequence corresponding to the target nucleic acid sequence or a portion thereof), wherein the single stranded polynucleotide can further comprise a terminal phosphate group, such as a 5'-phosphate (see for example Martinez et al., 2002, Cell., 110, 563-574 and Schwarz et al., 2002, Molecular Cell, 10, 537-568), or 5',3'-diphosphate. In certain embodiments, the siNA molecule of the invention comprises separate sense and antisense sequences or regions, wherein the sense and antisense regions are covalently linked by nucleotide or nonnucleotide linkers molecules as is known in the art, or are alternately non-covalently linked by ionic interactions, hydrogen bonding, van der waals interactions, hydrophobic interactions, and/or stacking interactions. In certain embodiments, the siNA molecules of the invention comprise nucleotide sequence that is complementary to nucleotide sequence of a target gene. In another embodiment, the siNA molecule of the invention interacts with nucleotide sequence of a target gene in a manner that causes inhibition of expression of the target gene. As used herein, siNA molecules need not be limited to those molecules containing only RNA, but further encompasses chemically-modified nucleotides and non-nucleotides. In certain embodiments, the short interfering nucleic acid molecules of the invention lack 2'-hydroxy (2'-OH) containing nucleotides. Applicant describes in certain embodiments short interfering nucleic acids that do not require the presence of nucleotides having a 2'-hydroxy group for mediating RNAi and as such, short interfering nucleic acid molecules of the invention optionally do not include any ribonucleotides (e.g., nucleotides having a 2'-OH group). Such siNA molecules that do not require the presence of ribonucleotides within the siNA molecule to support RNAi can however have an attached linker or linkers or other attached or associated groups, moieties, or chains containing one or more nucleotides with 2'-OH groups. Optionally, siNA molecules can comprise ribonucleotides at about 5, 10, 20, 30, 40, or 50% of the nucleotide positions. The modified short interfering nucleic acid 30 molecules of the invention can also be referred to as short interfering modified oligonucleotides "siMON." As used herein, the term siNA is meant to be equivalent to

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other terms used to describe nucleic acid molecules that are capable of mediating sequence specific RNAi, for example short interfering RNA (siRNA), double-stranded RNA (dsRNA), micro-RNA (miRNA), short hairpin RNA (shRNA), short interfering oligonucleotide, short interfering nucleic acid, short interfering modified oligonucleotide, chemically-modified siRNA, post-transcriptional gene silencing RNA (ptgsRNA), and others. In addition, as used herein, the term RNAi is meant to be equivalent to other terms used to describe sequence specific RNA interference, such as post transcriptional gene silencing, translational inhibition, or epigenetics. For example, siNA molecules of the invention can be used to epigenetically silence genes at both the post-transcriptional level or the pre-transcriptional level. In a non-limiting example, epigenetic regulation of gene expression by siNA molecules of the invention can result from siNA mediated modification of chromatin structure or methylation pattern to alter gene expression (see, for example, Verdel et al., 2004, Science, 303, 672-676; Pal-Bhadra et al., 2004, Science, 303, 669-672; Allshire, 2002, Science, 297, 1818-1819; Volpe et al., 2002, Science, 297, 1833-1837; Jenuwein, 2002, Science, 297, 2215-2218; and Hall et al., 2002, Science, 297, 2232-2237).

In one embodiment, a siNA molecule of the invention is a duplex forming oligonucleotide "DFO", (see for example Figures 14-15 and Vaish et al., USSN 10/727,780 filed December 3, 2003 and International PCT Application No. US04/16390, filed May 24, 2004).

In one embodiment, a siNA molecule of the invention is a multifunctional siNA, (see for example Figures 16-21 and Jadhav et al., USSN 60/543,480 filed February 10, 2004 and International PCT Application No. US04/16390, filed May 24, 2004). The multifunctional siNA of the invention can comprise sequence targeting, for example, two regions of target RNA.

By "asymmetric hairpin" as used herein is meant a linear siNA molecule comprising an antisense region, a loop portion that can comprise nucleotides or nonnucleotides, and a sense region that comprises fewer nucleotides than the antisense region to the extent that the sense region has enough complementary nucleotides to base pair with the antisense region and form a duplex with loop. For example, an asymmetric hairpin siNA molecule of the invention can comprise an antisense region having length

sufficient to mediate RNAi in a cell or in vitro system (e.g. about 15 to about 30, or about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 nucleotides) and a loop region comprising about 4 to about 12 (e.g., about 4, 5, 6, 7, 8, 9, 10, 11, or 12) nucleotides, and a sense region having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) nucleotides that are complementary to the antisense region. The asymmetric hairpin siNA molecule can also comprise a 5'-terminal phosphate group that can be chemically modified. The loop portion of the asymmetric hairpin siNA molecule can comprise nucleotides, non-nucleotides, linker molecules, or conjugate molecules as described herein.

By "asymmetric duplex" as used herein is meant a siNA molecule having two separate strands comprising a sense region and an antisense region, wherein the sense region comprises fewer nucleotides than the antisense region to the extent that the sense region has enough complementary nucleotides to base pair with the antisense region and form a duplex. For example, an asymmetric duplex siNA molecule of the invention can comprise an antisense region having length sufficient to mediate RNAi in a cell or in vitro system (e.g. about 15 to about 30, or about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 nucleotides) and a sense region having about 3 to about 25 (e.g., about 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) nucleotides that are complementary to the antisense region.

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By "modulate" is meant that the expression of the gene, or level of RNA molecule or equivalent RNA molecules encoding one or more proteins or protein subunits, or activity of one or more proteins or protein subunits is up regulated or down regulated, such that expression, level, or activity is greater than or less than that observed in the absence of the modulator. For example, the term "modulate" can mean "inhibit," but the use of the word "modulate" is not limited to this definition.

By "inhibit", "down-regulate", or "reduce", it is meant that the expression of the gene, or level of RNA molecules or equivalent RNA molecules encoding one or more proteins or protein subunits, or activity of one or more proteins or protein subunits, is reduced below that observed in the absence of the nucleic acid molecules (e.g., siNA) of the invention. In one embodiment, inhibition, down-regulation or reduction with an siNA molecule is below that level observed in the presence of an inactive or attenuated

molecule. In another embodiment, inhibition, down-regulation, or reduction with siNA molecules is below that level observed in the presence of, for example, an siNA molecule with scrambled sequence or with mismatches. In another embodiment, inhibition, down-regulation, or reduction of gene expression with a nucleic acid molecule of the instant invention is greater in the presence of the nucleic acid molecule than in its absence. In one embodiment, inhibition, down regulation, or reduction of gene expression is associated with post transcriptional silencing, such as RNAi mediated cleavage of a target nucleic acid molecule (e.g. RNA) or inhibition of translation. In one embodiment, inhibition, down regulation, or reduction of gene expression is associated with pretranscriptional silencing.

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By "gene", or "target gene", is meant a nucleic acid that encodes an RNA, for example, nucleic acid sequences including, but not limited to, structural genes encoding a polypeptide. A gene or target gene can also encode a functional RNA (fRNA) or noncoding RNA (ncRNA), such as small temporal RNA (stRNA), micro RNA (miRNA), small nuclear RNA (snRNA), short interfering RNA (siRNA), small nucleolar RNA (snRNA), ribosomal RNA (rRNA), transfer RNA (tRNA) and precursor RNAs thereof. Such non-coding RNAs can serve as target nucleic acid molecules for siNA mediated RNA interference in modulating the activity of fRNA or ncRNA involved in functional or regulatory cellular processes. Abberant fRNA or ncRNA activity leading to disease can therefore be modulated by siNA molecules of the invention. siNA molecules targeting fRNA and ncRNA can also be used to manipulate or alter the genotype or phenotype of a subject, organism or cell, by intervening in cellular processes such as genetic imprinting, transcription, translation, or nucleic acid processing (e.g., transamination, methylation etc.). The target gene can be a gene derived from a cell, an endogenous gene, a transgene, or exogenous genes such as genes of a pathogen, for example a virus, which is present in the cell after infection thereof. The cell containing the target gene can be derived from or contained in any organism, for example a plant, animal, protozoan, virus, bacterium, or fungus. Non-limiting examples of plants include monocots, dicots, or gymnosperms. Non-limiting examples of animals include vertebrates or invertebrates. Non-limiting examples of fungi include molds or yeasts. For a review, see for example Snyder and Gerstein, 2003, Science, 300, 258-260.

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By "non-canonical base pair" is meant any non-Watson Crick base pair, such as mismatches and/or wobble base pairs, including flipped mismatches, single hydrogen bond mismatches, trans-type mismatches, triple base interactions, and quadruple base interactions. Non-limiting examples of such non-canonical base pairs include, but are 5 not limited to, AC reverse Hoogsteen, AC wobble, AU reverse Hoogsteen, GU wobble, AA N7 amino, CC 2-carbonyl-amino(H1)-N3-amino(H2), GA sheared, UC 4-carbonylamino, UU imino-carbonyl, AC reverse wobble, AU Hoogsteen, AU reverse Watson Crick, CG reverse Watson Crick, GC N3-amino-amino N3, AA N1-amino symmetric, AA N7-amino symmetric, GA N7-N1 amino-carbonyl, GA+ carbonyl-amino N7-N1, GG N1-carbonyl symmetric, GG N3-amino symmetric, CC carbonyl-amino symmetric, CC N3-amino symmetric, UU 2-carbonyl-imino symmetric, UU 4-carbonyl-imino symmetric, AA amino-N3, AA N1-amino, AC amino 2-carbonyl, AC N3-amino, AC N7-amino, AU amino-4-carbonyl, AU N1-imino, AU N3-imino, AU N7-imino, CC carbonyl-amino, GA amino-N1, GA amino-N7, GA carbonyl-amino, GA N3-amino, GC amino-N3, GC carbonyl-amino, GC N3-amino, GC N7-amino, GG amino-N7, GG carbonyl-imino, GG N7-amino, GU amino-2-carbonyl, GU carbonyl-imino, GU imino-2-carbonyl, GU N7-imino, psiU imino-2-carbonyl, UC 4-carbonyl-amino, UC iminocarbonyl, UU imino-4-carbonyl, AC C2-H-N3, GA carbonyl-C2-H, UU imino-4carbonyl 2 carbonyl-C5-H, AC amino(A) N3(C)-carbonyl, GC imino amino-carbonyl, Gpsi imino-2-carbonyl amino-2- carbonyl, and GU imino amino-2-carbonyl base pairs.

By "target" as used herein is meant, any target protein, peptide, or polypeptide, such as encoded by Genbank Accession Nos. shown in Table I. The term "target" also refers to nucleic acid sequences encoding any protein, peptide, or polypeptide (e.g., DNA and RNA). The term "target" is also meant to include other target encoding sequences, such as other isoforms, mutations, splice variants, and polymorphisms associated with a given target.

By "homologous sequence" is meant, a nucleotide sequence that is shared by one or more polynucleotide sequences, such as genes, gene transcripts and/or non-coding polynucleotides. For example, a homologous sequence can be a nucleotide sequence that is shared by two or more genes encoding related but different proteins, such as different members of a gene family, different protein epitopes, different protein isoforms or

completely divergent genes, such as a cytokine and its corresponding receptors. A homologous sequence can be a nucleotide sequence that is shared by two or more noncoding polynucleotides, such as noncoding DNA or RNA, regulatory sequences, introns, and sites of transcriptional control or regulation. Homologous sequences can also include conserved sequence regions shared by more than one polynucleotide sequence. Homology does not need to be perfect homology (e.g., 100%), as partially homologous sequences are also contemplated by the instant invention (e.g., 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92%, 91%, 90%, 89%, 88%, 87%, 86%, 85%, 84%, 83%, 82%, 81%, 80% etc.).

By "conserved sequence region" is meant, a nucleotide sequence of one or more regions in a polynucleotide does not vary significantly between generations or from one biological system, subject, or organism to another biological system, subject, or organism. The polynucleotide can include both coding and non-coding DNA and RNA.

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By "sense region" is meant a nucleotide sequence of a siNA molecule having complementarity to an antisense region of the siNA molecule. In addition, the sense region of a siNA molecule can comprise a nucleic acid sequence having homology with a target nucleic acid sequence.

By "antisense region" is meant a nucleotide sequence of a siNA molecule having complementarity to a target nucleic acid sequence. In addition, the antisense region of a siNA molecule can optionally comprise a nucleic acid sequence having complementarity to a sense region of the siNA molecule.

By "target nucleic acid" or "target polynucleotide" is meant any nucleic acid sequence whose expression or activity is to be modulated. The target nucleic acid can be DNA or RNA.

By "complementarity" is meant that a nucleic acid can form hydrogen bond(s) with another nucleic acid sequence by either traditional Watson-Crick or other non-traditional types. In reference to the nucleic molecules of the present invention, the binding free energy for a nucleic acid molecule with its complementary sequence is sufficient to allow the relevant function of the nucleic acid to proceed, e.g., RNAi activity. Determination of binding free energies for nucleic acid molecules is well known in the

art (see, e.g., Turner et al., 1987, CSH Symp. Quant. Biol. LII pp.123-133; Frier et al., 1986, Proc. Nat. Acad. Sci. USA 83:9373-9377; Turner et al., 1987, J. Am. Chem. Soc. 109:3783-3785). A percent complementarity indicates the percentage of contiguous residues in a nucleic acid molecule that can form hydrogen bonds (e.g., Watson-Crick base pairing) with a second nucleic acid sequence (e.g., 5, 6, 7, 8, 9, or 10 nucleotides out of a total of 10 nucleotides in the first oligonucleotide being based paired to a second nucleic acid sequence having 10 nucleotides represents 50%, 60%, 70%, 80%, 90%, and 100% complementary respectively). "Perfectly complementry" means that all the contiguous residues of a nucleic acid sequence will hydrogen bond with the same number of contiguous residues in a second nucleic acid sequence. In one embodiment, a siNA molecule of the invention comprises about 15 to about 30 or more (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 or more) nucleotides that are complementary to one or more target nucleic acid molecules or a portion thereof.

In one embodiment, siNA molecules of the invention that down regulate or reduce target gene expression are used for preventing or treating diseases, traits, disorders, and/or conditions in a subject or organism.

By "proliferative disease" or "cancer" as used herein is meant, any disease, condition, trait, genotype or phenotype characterized by unregulated cell growth or replication as is known in the art; including AIDS related cancers such as Kaposi's sarcoma; breast cancers; bone cancers such as Osteosarcoma, Chondrosarcomas, Ewing's sarcoma, Fibrosarcomas, Giant cell tumors, Adamantinomas, and Chordomas; Brain cancers such as Meningiomas, Glioblastomas, Lower-Grade Astrocytomas, Oligodendrocytomas, Pituitary Tumors, Schwannomas, and Metastatic brain cancers; cancers of the head and neck including various lymphomas such as mantle cell lymphoma, non-Hodgkins lymphoma, adenoma, squamous cell carcinoma, laryngeal carcinoma, gallbladder and bile duct cancers, cancers of the retina such as retinoblastoma, cancers of the esophagus, gastric cancers, multiple myeloma, ovarian cancer, uterine cancer, thyroid cancer, testicular cancer, endometrial cancer, melanoma, colorectal cancer, lung cancer, bladder cancer, prostate cancer, lung cancer (including non-small cell lung carcinoma), pancreatic cancer, sacomas, Wilms' tumor, cervical cancer, bead and neck cancer, skin cancers, nasopharyngeal carcinoma, liposarcoma,

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epithelial carcinoma, renal cell carcinoma, gallbladder adeno carcinoma, parotid adenocarcinoma, endometrial sarcoma, multidrug resistant cancers, and leukemias such as acute myelogenous leukemia (AML), chronic myelogenous leukemia (CML), acute lymphocytic leukemia (ALL), and chronic lymphocytic leukemia; and proliferative diseases and conditions, such as neovascularization associated with tumor angiogenesis, macular degeneration (e.g., wet/dry AMD), corneal neovascularization, diabetic retinopathy, neovascular glaucoma, myopic degeneration and other proliferative diseases and conditions such as restenosis and polycystic kidney disease, and any other cancer or proliferative disease, condition, trait, genotype or phenotype that can respond to the modulation of disease related gene expression in a cell or tissue, alone or in combination with other therapies.

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By "inflammatory disease" or "inflammatory condition" as used herein is meant any disease, condition, trait, genotype or phenotype characterized by an inflammatory or allergic process as is known in the art, such as inflammation, acute inflammation, chronic inflammation, respiratory disease, atherosclerosis, restenosis, asthma, allergic rhinitis, atopic dermatitis, septic shock, rheumatoid arthritis, inflammatory bowl disease, inflammotory pelvic disease, pain, ocular inflammatory disease, celiac disease, Leigh Syndrome, Glycerol Kinase Deficiency, Familial eosinophilia (FE), autosomal recessive spastic ataxia, laryngeal inflammatory disease; Tuberculosis, Chronic cholecystitis, Bronchiectasis, Silicosis and other pneumoconioses, and any other inflammatory disease, condition, trait, genotype or phenotype that can respond to the modulation of disease related gene expression in a cell or tissue, alone or in combination with other therapies.

By "autoimmune disease" or "autoimmune condition" as used herein is meant, any disease, condition, trait, genotype or phenotype characterized by autoimmunity as is known in the art, such as multiple sclerosis, diabetes mellitus, lupus, celiac disease, Crohn's disease, ulcerative colitis, Guillain-Barre syndrome, scleroderms, Goodpasture's syndrome, Wegener's granulomatosis, autoimmune epilepsy, Rasmussen's encephalitis, Primary biliary sclerosis, Sclerosing cholangitis, Autoimmune hepatitis, Addison's disease, Hashimoto's thyroiditis, Fibromyalgia, Menier's syndrome; transplantation rejection (e.g., prevention of allograft rejection) pernicious anemia, rheumatoid arthritis, systemic lupus erythematosus, dermatomyositis, Siogren's syndrome, lupus

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erythematosus, multiple sclerosis, myasthenia gravis, Reiter's syndrome, Grave's disease, and any other autoimmune disease, condition, trait, genotype or phenotype that can respond to the modulation of disease related gene expression in a cell or tissue, alone or in combination with other therapies.

5 By "infectious disease" is meant any disease, condition, trait, genotype or phenotype associated with an infectious agent, such as a virus, bacteria, fungus, prion, or parasite. Non-limiting examples of various viral genes that can be targeted using siNA molecules of the invention include Hepatitis C Virus (HCV, for example Genbank Accession Nos: D11168, D50483.1, L38318 and S82227), Hepatitis B Virus (HBV, for example GenBank Accession No. AF100308.1), Human Immunodeficiency Virus type 1 (HIV-1, for example GenBank Accession No. U51188), Human Immunodeficiency Virus type 2 (HIV-2, for example GenBank Accession No. X60667), West Nile Virus (WNV for example GenBank accession No. NC 001563), cytomegalovirus (CMV for example GenBank Accession No. NC 001347), respiratory syncytial virus (RSV for example GenBank Accession No. NC\_001781), influenza virus (for example GenBank Accession No. AF037412, rhinovirus (for example, GenBank accession numbers: D00239, X02316, X01087, L24917, M16248, K02121, X01087), papillomavirus (for example GenBank Accession No. NC\_001353), Herpes Simplex Virus (HSV for example GenBank Accession No. NC\_001345), and other viruses such as HTLV (for 20 example GenBank Accession No. AJ430458). Due to the high sequence variability of many viral genomes, selection of siNA molecules for broad therapeutic applications would likely involve the conserved regions of the viral genome. Nonlimiting examples of conserved regions of the viral genomes include but are not limited to 5'-Non Coding Regions (NCR), 3'- Non Coding Regions (NCR) and/or internal ribosome entry sites (IRES). siNA molecules designed against conserved regions of various viral genomes 25 will enable efficient inhibition of viral replication in diverse patient populations and may ensure the effectiveness of the siNA molecules against viral quasi species which evolve due to mutations in the non-conserved regions of the viral genome. Non-limiting examples of bacterial infections include Actinomycosis, Anthrax, Aspergillosis, Bacterenia, Bacterial Infections and Mycoses, Bartonella Infections, Botulism, Brucellosis, Burkholderia Infections, Campylobacter Infections, Candidiasis, Cat-Scratch Disease, Chlamydia Infections, Cholera , Clostridium Infections, Coccidioidomycosis,

Cross Infection, Cryptococcosis, Dermatomycoses, Dermatomycoses, Diphtheria, Ehrlichiosis, Escherichia coli Infections, Fasciitis, Necrotizing, Fusobacterium Infections, Gas Gangrene, Gram-Negative Bacterial Infections, Gram-Positive Bacterial Infections, Histoplasmosis, Impetigo, Klebsiella Infections, Legionellosis, Leprosy, Leptospirosis, Listeria Infections, Lyme Disease, Maduromycosis, Melioidosis, Mycobacterium Infections, Mycoplasma Infections, Mycoses, Nocardia Infections, Onychomycosis, Ornithosis, Plague, Pneumococcal Infections, Pseudomonas Infections, Q Fever, Rat-Bite Fever, Relapsing Fever, Rheumatic Fever, Rickettsia Infections, Rocky Mountain Spotted Fever, Salmonella Infections, Scarlet Fever, Scrub Typhus, Sepsis, Sexually Transmitted Diseases - Bacterial, Bacterial Skin Diseases, 10 Staphylococcal Infections, Streptococcal Infections, Tetanus, Tick-Borne Diseases, Tuberculosis, Tularemia, Typhoid Fever, Typhus, Epidemic Louse-Borne, Vibrio Infections, Yaws, Yersinia Infections, Zoonoses, and Zygomycosis. Non-limiting of fungal infections include Aspergillosis, Blastomycosis, Coccidioidomycosis, Cryptococcosis, Fungal Infections of Fingernails and Toenails, Fungal Sinusitis, Histoplasmosis, Histoplasmosis, Mucormycosis, Nail Fungal Infection, Paracoccidioidomycosis, Sporotrichosis, Valley Fever (Coccidioidomycosis), and Mold Allergy.

By "neurologic disease" or "neurological disease" is meant any disease, disorder, or condition affecting the central or peripheral nervous system, inleuding ADHD, AIDS - Neurological Complications, Absence of the Septum Pellucidum, Acquired Epileptiform Aphasia, Acute Disseminated Encephalomyelitis, Adrenoleukodystrophy, Agenesis of the Corpus Callosum, Agnosia, Aicardi Syndrome, Alexander Disease, Alpers' Disease, Alternating Hemiplegia, Alzheimer's Disease, Amyotrophic Lateral Sclerosis, Anencephaly, Aneurysm, Angelman Syndrome, Angiomatosis, Anoxia, Aphasia, Apraxia, Arachnoid Cysts, Arachnoiditis, Arnold-Chiari Malformation, Arteriovenous Malformation, Aspartame, Asperger Syndrome, Ataxia Telangicetasia, Ataxia, Attention Deficit-Hyperactivity Disorder, Autism, Autonomic Dysfunction, Back Pain, Barth Syndrome, Batten Disease, Beheet's Disease, Bell's Palsy, Benign Essential Blepharospasm, Benign Focal Amyotrophy, Benign Intracranial Hypertension, Bernhardt-Roth Syndrome, Binswanger's Disease, Blepharospasm, Bloch-Sulzberger Syndrome, Brachial Plexus Birth Injuries, Brachial Plexus Injuries, Brachial Plexus Birth Injuries, Brachial Plexus Birth Injuries, Brachial Plexus Birth Injuries, Brachial Plexus Birthury-Eggleston

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Syndrome, Brain Aneurysm, Brain Injury, Brain and Spinal Tumors, Brown-Sequard Syndrome, Bulbospinal Muscular Atrophy, Canavan Disease, Carpal Tunnel Syndrome. Causalgia, Cavernomas, Cavernous Angioma, Cavernous Malformation, Central Cervical Cord Syndrome, Central Cord Syndrome, Central Pain Syndrome, Cephalic Disorders, Cerebellar Degeneration, Cerebellar Hypoplasia, Cerebral Aneurysm. Cerebral Arteriosclerosis, Cerebral Atrophy, Cerebral Beriberi, Cerebral Gigantism, Cerebral Hypoxia, Cerebral Palsy, Cerebro-Oculo-Facio-Skeletal Syndrome, Charcot-Marie-Tooth Disorder, Chiari Malformation, Chorea, Choreoacanthocytosis, Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), Chronic Orthostatic Intolerance, Chronic Pain, Cockayne Syndrome Type II, Coffin Lowry Syndrome, Coma, including Persistent Vegetative State, Complex Regional Pain Syndrome, Congenital Facial Diplegia, Congenital Myasthenia, Congenital Myopathy, Congenital Vascular Cavernous Malformations, Corticobasal Degeneration, Cranial Arteritis, Craniosynostosis, Creutzfeldt-Jakob Disease, Cumulative Trauma Disorders, Cushing's Syndrome, 15 Cytomegalic Inclusion Body Disease (CIBD), Cytomegalovirus Infection, Dancing Eyes-Dancing Feet Syndrome, Dandy-Walker Syndrome, Dawson Disease, De Morsier's Syndrome, Dejerine-Klumpke Palsy, Dementia - Multi-Infarct, Dementia - Subcortical. Dementia With Lewy Bodies, Dermatomyositis, Developmental Dyspraxia, Devic's Syndrome, Diabetic Neuropathy, Diffuse Sclerosis, Dravet's Syndrome, Dysautonomia, 20 Dysgraphia, Dyslexia, Dysphagia, Dyspraxia, Dystonias, Early Infantile Epileptic Encephalopathy, Empty Sella Syndrome, Encephalitis Lethargica, Encephalitis and Meningitis, Encephaloceles, Encephalopathy, Encephalotrigeminal Angiomatosis, Epilepsy, Erb's Palsy, Erb-Duchenne and Dejerine-Klumpke Palsies, Fabry's Disease, Fahr's Syndrome, Fainting, Familial Dysautonomia, Familial Hemangioma, Familial 25 Idiopathic Basal Ganglia Calcification, Familial Spastic Paralysis, Febrile Seizures (e.g., GEFS and GEFS plus), Fisher Syndrome, Floppy Infant Syndrome, Friedreich's Ataxia, Gaucher's Disease, Gerstmann's Syndrome, Gerstmann-Straussler-Scheinker Disease, Giant Cell Arteritis, Giant Cell Inclusion Disease, Globoid Cell Leukodystrophy, Glossopharyngeal Neuralgia, Guillain-Barre Syndrome, HTLV-1 Associated 30 Myelopathy, Hallervorden-Spatz Disease, Head Injury, Headache, Hemicrania Continua, Hemifacial Spasm, Hemiplegia Alterans, Hereditary Neuropathies, Hereditary Spastic Paraplegia, Heredopathia Atactica Polyneuritiformis, Herpes Zoster Oticus, Herpes

Syndrome, Holoprosencephaly, Huntington's Disease, Zoster. Hirayama Hydrocephalus, Hydrocephalus - Normal Pressure, Hydrocephalus, Hydromyelia, Hypercortisolism, Hypersomnia, Hypertonia, Hypotonia, Hypoxia, Immune-Mediated Encephalomyelitis, Inclusion Body Myositis, Incontinentia Pigmenti, Infantile Hypotonia, Infantile Phytanic Acid Storage Disease, Infantile Refsum Disease, Infantile Spasms, Inflammatory Myopathy, Intestinal Lipodystrophy, Intracranial Cysts, Intracranial Hypertension, Isaac's Syndrome, Joubert Syndrome, Kearns-Sayre Syndrome, Kennedy's Disease, Kinsbourne syndrome, Kleine-Levin syndrome, Klippel Feil Syndrome, Klippel-Trenaunay Syndrome (KTS), Klüver-Bucy Syndrome, Korsakoff's Amnesic Syndrome, Krabbe Disease, Kugelberg-Welander Disease, Kuru, 10 Lambert-Eaton Myasthenic Syndrome, Landau-Kleffner Syndrome, Lateral Femoral Cutaneous Nerve Entrapment, Lateral Medullary Syndrome, Learning Disabilities, Leigh's Disease, Lennox-Gastaut Syndrome, Lesch-Nyhan Syndrome, Leukodystrophy, Levine-Critchley Syndrome, Lewy Body Dementia, Lissencephaly, Locked-In Syndrome, Lou Gehrig's Disease, Lupus - Neurological Sequelae, Lyme Disease -15 Machado-Joseph Disease. Neurological Complications, Macrencephaly. Megalencephaly, Melkersson-Rosenthal Syndrome, Meningitis, Menkes Disease, Meralgia Paresthetica, Metachromatic Leukodystrophy, Microcephaly, Migraine, Miller Fisher Syndrome, Mini-Strokes, Mitochondrial Myopathies, Mobius Syndrome, Monomelic Amyotrophy, Motor Neuron Diseases, Moyamoya Disease, Mucolipidoses, Mucopolysaccharidoses, Multi-Infarct Dementia, Multifocal Motor Neuropathy, Multiple Sclerosis, Multiple System Atrophy with Orthostatic Hypotension, Multiple System Atrophy, Muscular Dystrophy, Myasthenia - Congenital, Myasthenia Gravis, Myelinoclastic Diffuse Sclerosis, Myoclonic Encephalopathy of Infants, Myoclonus, 25 Myopathy - Congenital, Myopathy - Thyrotoxic, Myopathy, Myotonia Congenita, Myotonia, Narcolepsy, Neuroacanthocytosis, Neurodegeneration with Brain Iron Accumulation, Neurofibromatosis, Neuroleptic Malignant Syndrome, Neurological Complications of AIDS, Neurological Manifestations of Pompe Disease, Neuromyelitis Optica, Neuromyotonia, Neuronal Ceroid Lipofuscinosis, Neuronal Migration Disorders, Neuropathy - Hereditary, Neurosarcoidosis, Neurotoxicity, Nevus Cavernosus, Niemann-

30 Pick Disease, O'Sullivan-McLeod Syndrome, Occipital Neuralgia, Occult Spinal Dysraphism Sequence, Ohtahara Syndrome, Olivopontocerebellar Atrophy, Opsoclonus

Myoclonus, Orthostatic Hypotension, Overuse Syndrome, Pain - Chronic, Paraneoplastic Syndromes, Paresthesia, Parkinson's Disease, Parmyotonia Congenita, Paroxysmal Choreoathetosis, Paroxysmal Hemicrania, Parry-Romberg, Pelizaeus-Merzbacher Disease, Pena Shokeir II Syndrome, Perineural Cysts, Periodic Paralyses, Peripheral Neuropathy, Periventricular Leukomalacia, Persistent Vegetative State, Pervasive Developmental Disorders, Phytanic Acid Storage Disease, Pick's Disease, Piriformis Syndrome, Pituitary Tumors, Polymyositis, Pompe Disease, Porencephaly, Post-Polio Syndrome, Postherpetic Neuralgia, Postinfectious Encephalomyelitis, Postural Hypotension, Postural Orthostatic Tachycardia Syndrome, Postural Tachycardia Syndrome, Primary Lateral Sclerosis, Prion Diseases, Progressive Hemifacial Atrophy, 10 Progressive Locomotor Ataxia, Progressive Multifocal Leukoencephalopathy, Progressive Sclerosing Poliodystrophy, Progressive Supranuclear Palsy, Pseudotumor Cerebri, Pyridoxine Dependent and Pyridoxine Responsive Siezure Disorders, Ramsay Hunt Syndrome Type I, Ramsay Hunt Syndrome Type II, Rasmussen's Encephalitis and other autoimmune epilepsies, Reflex Sympathetic Dystrophy Syndrome, Refsum Disease - Infantile, Refsum Disease, Repetitive Motion Disorders, Repetitive Stress Injuries, Restless Legs Syndrome, Retrovirus-Associated Myelopathy, Rett Syndrome, Reye's Syndrome, Riley-Day Syndrome, SUNCT Headache, Sacral Nerve Root Cysts, Saint Vitus Dance, Salivary Gland Disease, Sandhoff Disease, Schilder's Disease, Schizencephaly, Seizure Disorders, Septo-Optic Dysplasia, Severe Myoclonic Epilepsy of Infancy (SMEI), Shaken Baby Syndrome, Shingles, Shy-Drager Syndrome, Sjogren's Syndrome, Sleep Apnea, Sleeping Sickness, Soto's Syndrome, Spasticity, Spina Biffida, Spinal Cord Infarction, Spinal Cord Injury, Spinal Cord Tumors, Spinal Muscular Atrophy, Spinocerebellar Atrophy, Steele-Richardson-Olszewski Syndrome, Stiff-Person Syndrome, Striatonigral Degeneration, Stroke, Sturge-Weber Syndrome, Subacute 25 Sclerosing Panencephalitis, Subcortical Arteriosclerotic Encephalopathy, Swallowing Disorders, Sydenham Chorea, Syncope, Syphilitic Spinal Sclerosis, Syringohydromyelia, Syringomyelia, Systemic Lupus Erythematosus, Tabes Dorsalis, Tardive Dyskinesia, Tarlov Cysts, Tay-Sachs Disease, Temporal Arteritis, Tethered Spinal Cord Syndrome, Thomsen Disease, Thoracic Outlet Syndrome, Thyrotoxic Myopathy, Tic Douloureux, 30 Todd's Paralysis, Tourette Syndrome, Transient Ischemic Attack, Transmissible Spongiform Encephalopathies, Transverse Myelitis, Traumatic Brain Injury, Tremor,

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Trigeminal Neuralgia, Tropical Spastic Paraparesis, Tuberous Sclerosis, Vascular Erectile Tumor, Vasculitis including Temporal Arteritis, Von Economo's Disease, Von Hippel-Lindau disease (VHL), Von Recklinghausen's Disease, Wallenberg's Syndrome, Werdnig-Hoffman Disease, Wernicke-Korsakoff Syndrome, West Syndrome, Whipple's Disease, Williams Syndrome, Wilson's Disease, X-Linked Spinal and Bulbar Muscular Atrophy, and Zellweger Syndrome.

By "respiratory disease" is meant, any disease or condition affecting the respiratory tract, such as asthma, chronic obstructive pulmonary disease or "COPD", allergic rhinitis, sinusitis, pulmonary vasoconstriction, inflammation, allergies, impeded respiration, respiratory distress syndrome, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, and any other respiratory disease, condition, trait, genotype or phenotype that can respond to the modulation of disease related gene expression in a cell or tissue, alone or in combination with other therapies.

By "cardiovascular disease" is meant and disease or condition affecting the heart and vasculature, inlcuding but not limited to, coronary heart disease (CHD), cerebrovascular disease (CVD), aortic stenosis, peripheral vascular disease, atherosclerosis, arteriosclerosis, myocardial infarction (heart attack), cerebrovascular diseases (stroke), transient ischaemic attacks (TIA), angina (stable and unstable), atrial fibrillation, arrhythmia, vavular disease, congestive heart failure, hypercholoesterolemia, type I hyperlipoproteinemia, type III hyperlipoproteinemia, type III hyperlipoproteinemia, type IV hyperlipoproteinemia, secondary hypertrigliceridemia, and familial lecithin cholesterol acyttransferase deficiency.

By "ocular disease" as used herein is meant, any disease, condition, trait, genotype or phenotype of the eye and related structures as is known in the art, such as Cystoid Macular Edema, Asteroid Hyalosis, Pathological Myopia and Posterior Staphyloma, Toxocariasis (Ocular Larva Migrans), Retinal Vein Occlusion, Posterior Vitreous Detachment, Tractional Retinal Tears, Epiretinal Membrane, Diabetic Retinopathy, Lattice Degeneration, Retinal Vein Occlusion, Retinal Artery Occlusion, Macular Degeneration (e.g., age related macular degeneration such as wet AMD or dry AMD), Toxoplasmosis, Choroidal Melanoma, Acquired Retinoschisis, Hollenhorst Plaque, Idiopathic Central Serous Chorioretinopathy, Macular Hole, Presumed Ocular

Histoplasmosis Syndrome, Retinal Macroaneursym, Retinitis Pigmentosa, Retinal Detachment, Hypertensive Retinopathy, Retinal Pigment Epithelium (RPE) Detachment, Papillophlebitis, Ocular Ischemic Syndrome, Coats' Disease, Leber's Miliary Aneurysm, Conjunctival Neoplasms, Allergic Conjunctivitis, Vernal Conjunctivitis, Acute Bacterial Conjunctivitis, Allergic Conjunctivitis &Vernal Keratoconjunctivitis, Viral Conjunctivitis, Bacterial Conjunctivitis, Chlamydial & Gonococcal Conjunctivitis, Conjunctival Laceration, Episcleritis, Scleritis, Pingueculitis, Pterygium, Superior Limbic Keratoconjunctivitis (SLK of Theodore), Toxic Conjunctivitis, Conjunctivitis with Pseudomembrane, Giant Papillary Conjunctivitis, Terrien's Marginal Degeneration, Acanthamoeba Keratitis, Fungal Keratitis, Filamentary Keratitis, Bacterial Keratitis, Keratitis Sicca/Dry Eye Syndrome, Bacterial Keratitis, Herpes Simplex Keratitis, Sterile Corneal Infiltrates, Phlyctenulosis, Corneal Abrasion & Recurrent Corneal Erosion, Corneal Foreign Body, Chemical Burs, Epithelial Basement Membrane Dystrophy (EBMD), Thygeson's Superficial Punctate Keratopathy, Corneal Laceration, Salzmann's Nodular Degeneration, Fuchs' Endothelial Dystrophy, Crystalline Lens Subluxation, 15 Ciliary-Block Glaucoma, Primary Open-Angle Glaucoma, Pigment Dispersion Syndrome and Pigmentary Glaucoma, Pseudoexfoliation Syndrom and Pseudoexfoliative Glaucoma, Anterior Uveitis, Primary Open Angle Glaucoma, Uveitic Glaucoma & Glaucomatocyclitic Crisis, Pigment Dispersion Syndrome & Pigmentary Glaucoma, Acute Angle Closure Glaucoma, Anterior Uveitis, Hyphema, Angle Recession 20 Glaucoma, Lens Induced Glaucoma, Pseudoexfoliation Syndrome and Pseudoexfoliative Glaucoma, Axenfeld-Rieger Syndrome, Neovascular Glaucoma, Pars Planitis, Choroidal Rupture, Duane's Retraction Syndrome, Toxic/Nutritional Optic Neuropathy, Aberrant Regeneration of Cranial Nerve III, Intracranial Mass Lesions, Carotid-Cavernous Sinus Fistula, Anterior Ischemic Optic Neuropathy, Optic Disc Edema & Papilledema, Cranial 25 Nerve III Palsy, Cranial Nerve IV Palsy, Cranial Nerve VI Palsy, Cranial Nerve VII (Facial Nerve) Palsy, Horner's Syndrome, Internuclear Ophthalmoplegia, Optic Nerve Head Hypoplasia, Optic Pit, Tonic Pupil, Optic Nerve Head Drusen, Demyelinating Optic Neuropathy (Optic Neuritis, Retrobulbar Optic Neuritis), Amaurosis Fugax and Transient Ischemic Attack, Pseudotumor Cerebri, Pituitary Adenoma, Molluscum Contagiosum, Canaliculitis, Verruca and Papilloma, Pediculosis and Pthiriasis, Blepharitis, Hordeolum, Preseptal Cellulitis, Chalazion, Basal Cell Carcinoma, Herpes

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Zoster Ophthalmicus, Pediculosis & Phthiriasis, Blow-out Fracture, Chronic Epiphora, Dacryocystitis, Herpes Simplex Blepharitis, Orbital Cellulitis, Senile Entropion, and Squamous Cell Carcinoma.

By "metabolic disease" is meant any disease or condition affecting metabolic pathways as in known in the art. Metabolic disease can result in an abnormal metabolic process, either congenital due to inherited enzyme abnormality (inborn errors of metabolism) or acquired due to disease of an endocrine organ or failure of a metabolically important organ such as the liver. In one embodiment, metabolic disease includes obesity, insulin resistance, and diabetes (e.g., type I and/or type II diabetes).

In one embodiment of the present invention, each sequence of a siNA molecule of the invention is independently about 15 to about 30 nucleotides in length, in specific embodiments about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30 nucleotides in length. In another embodiment, the siNA duplexes of the invention independently comprise about 15 to about 30 base pairs (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30). In another embodiment, one or more strands of the siNA molecule of the invention independently comprises about 15 to about 30 nucleotides (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, or 30) that are complementary to a target nucleic acid molecule. In yet another embodiment, siNA molecules of the invention comprising hairpin or circular structures are about 35 to 20 about 55 (e.g., about 35, 40, 45, 50 or 55) nucleotides in length, or about 38 to about 44 (e.g., about 38, 39, 40, 41, 42, 43, or 44) nucleotides in length and comprising about 15 to about 25 (e.g., about 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25) base pairs. Exemplary siNA molecules of the invention are shown in Figures 4-5.

As used herein "cell" is used in its usual biological sense, and does not refer to an entire multicellular organism, e.g., specifically does not refer to a human. The cell can be present in an organism, e.g., birds, plants and mammals such as humans, cows, sheep, apes, monkeys, swine, dogs, and cats. The cell can be prokaryotic (e.g., bacterial cell) or eukaryotic (e.g., mammalian or plant cell). The cell can be of somatic or germ line origin, totipotent or pluripotent, dividing or non-dividing. The cell can also be derived from or can comprise a gamete or embryo, a stem cell, or a fully differentiated cell.

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The siNA molecules of the invention are added directly, or can be complexed with cationic lipids, packaged within liposomes, or otherwise delivered to target cells or tissues. The nucleic acid or nucleic acid complexes can be locally administered to relevant tissues ex vivo, or in vivo through direct dermal application, transdermal application, or injection, with or without their incorporation in biopolymers.

In another aspect, the invention provides mammalian cells containing one or more siNA molecules of this invention. The one or more siNA molecules can independently be targeted to the same or different sites.

By "RNA" is meant a molecule comprising at least one ribonucleotide residue. By 
"ribonucleotide" is meant a nucleotide with a hydroxyl group at the 2' position of a β-Dribofuranose moiety. The terms include double-stranded RNA, single-stranded RNA, 
isolated RNA such as partially purified RNA, essentially pure RNA, synthetic RNA, 
recombinantly produced RNA, as well as altered RNA that differs from naturally 
occurring RNA by the addition, deletion, substitution and/or alteration of one or more 
nucleotides. Such alterations can include addition of non-nucleotide material, such as to 
the end(s) of the siNA or internally, for example at one or more nucleotides of the RNA. 
Nucleotides in the RNA molecules of the instant invention can also comprise nonstandard nucleotides, such as non-naturally occurring nucleotides or chemically 
synthesized nucleotides or deoxynucleotides. These altered RNAs can be referred to as 
analogs or analogs of naturally-occurring RNA.

By "subject" is meant an organism, which is a donor or recipient of explanted cells or the cells themselves. "Subject" also refers to an organism to which the nucleic acid molecules of the invention can be administered. A subject can be a mammal or mammalian cells, including a human or human cells.

The term "phosphorothioate" as used herein refers to an internucleotide linkage having Formula I, wherein Z and/or W comprise a sulfur atom. Hence, the term phosphorothioate refers to both phosphorothioate and phosphorodithioate internucleotide linkages.

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The term "phosphonoacetate" as used herein refers to an internucleotide linkage having Formula I, wherein Z and/or W comprise an acetyl or protected acetyl group.

The term "thiophosphonoacetate" as used herein refers to an internucleotide linkage having Formula I, wherein Z comprises an acetyl or protected acetyl group and 5 W comprises a sulfur atom or alternately W comprises an acetyl or protected acetyl group and Z comprises a sulfur atom.

The term "universal base" as used herein refers to nucleotide base analogs that form base pairs with each of the natural DNA/RNA bases with little discrimination between them. Non-limiting examples of universal bases include C-phenyl, C-naphthyl and other aromatic derivatives, inosine, azole carboxamides, and nitroazole derivatives such as 3-nitropyrrole, 4-nitroindole, 5-nitroindole, and 6-nitroindole as known in the art (see for example Loakes, 2001, Nucleic Acids Research, 29, 2437-2447).

The term "acyclic nucleotide" as used herein refers to any nucleotide having an acyclic ribose sugar, for example where any of the ribose carbons (C1, C2, C3, C4, or C5), are independently or in combination absent from the nucleotide.

The nucleic acid molecules of the instant invention, individually, or in combination or in conjunction with other drugs, can be used to for preventing or treating diseases, traits, disorders, and/or conditions described herein or otherwise known in the art, in a subject or organism. For example, the siNA molecules can be administered to a subject or can be administered to other appropriate cells evident to those skilled in the art, individually or in combination with one or more drugs under conditions suitable for the treatment.

In a further embodiment, the siNA molecules can be used in combination with other known treatments to prevent or treat preventing or treating diseases, traits, disorders, and/or conditions described herein or otherwise known in the art, in a subject or organism. For example, the described molecules could be used in combination with one or more known compounds, treatments, or procedures to prevent or treat diseases, traits, disorders, and/or conditions described herein or otherwise known in the art, in a subject or organism.

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In one embodiment, the invention features an expression vector comprising a nucleic acid sequence encoding at least one siNA molecule of the invention, in a manner which allows expression of the siNA molecule. For example, the vector can contain sequence(s) encoding both strands of a siNA molecule comprising a duplex. The vector can also contain sequence(s) encoding a single nucleic acid molecule that is self-complementary and thus forms a siNA molecule. Non-limiting examples of such expression vectors are described in Paul et al., 2002, Nature Biotechnology, 19, 505; Miyagishi and Taira, 2002, Nature Biotechnology, 19, 497; Lee et al., 2002, Nature Biotechnology, 19, 500; and Novina et al., 2002, Nature Medicine, advance online publication doi:10.1038/nm725.

In another embodiment, the invention features a mammalian cell, for example, a human cell, including an expression vector of the invention.

In yet another embodiment, the expression vector of the invention comprises a sequence for a siNA molecule having complementarity to a RNA molecule referred to by Genbank Accession numbers, for example Genbank Accession Nos. shown in **Table I**.

In one embodiment, an expression vector of the invention comprises a nucleic acid sequence encoding two or more siNA molecules, which can be the same or different.

In another aspect of the invention, siNA molecules that interact with target RNA molecules and down-regulate gene encoding target RNA molecules (for example target RNA molecules referred to by Genbank Accession numbers herein) are expressed from transcription units inserted into DNA or RNA vectors. The recombinant vectors can be DNA plasmids or viral vectors siNA expressing viral vectors can be constructed based on, but not limited to, adeno-associated virus, retrovirus, adenovirus, or alphavirus. The recombinant vectors capable of expressing the siNA molecules can be delivered as described herein, and persist in target cells. Alternatively, viral vectors can be used that provide for transient expression of siNA molecules. Such vectors can be repeatedly administered as necessary. Once expressed, the siNA molecules bind and down-regulate gene function or expression via RNA interference (RNAi). Delivery of siNA expressing vectors can be systemic, such as by intravenous or intramuscular administration, by administration to target cells ex-planted from a subject followed by reintroduction into

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the subject, or by any other means that would allow for introduction into the desired target cell.

By "vectors" is meant any nucleic acid- and/or viral-based technique used to deliver a desired nucleic acid.

Other features and advantages of the invention will be apparent from the following description of the preferred embodiments thereof, and from the claims.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a non-limiting example of a scheme for the synthesis of siNA molecules. The complementary siNA sequence strands, strand 1 and strand 2, are synthesized in tandem and are connected by a cleavable linkage, such as a nucleotide succinate or abasic succinate, which can be the same or different from the cleavable linker used for solid phase synthesis on a solid support. The synthesis can be either solid phase or solution phase, in the example shown, the synthesis is a solid phase synthesis. The synthesis is performed such that a protecting group, such as a dimethoxytrityl group, remains intact on the terminal nucleotide of the tandem oligonucleotide. Upon cleavage and deprotection of the oligonucleotide, the two siNA strands spontaneously hybridize to form a siNA duplex, which allows the purification of the duplex by utilizing the properties of the terminal protecting group, for example by applying a trityl on purification method wherein only duplexes/oligonucleotides with the terminal protecting group are isolated.

Figure 2 shows a MALDI-TOF mass spectrum of a purified siNA duplex synthesized by a method of the invention. The two peaks shown correspond to the predicted mass of the separate siNA sequence strands. This result demonstrates that the siNA duplex generated from tandem synthesis can be purified as a single entity using a simple trityl-on purification methodology.

Figure 3 shows a non-limiting proposed mechanistic representation of target RNA degradation involved in RNAi. Double-stranded RNA (dsRNA), which is generated by RNA-dependent RNA polymerase (RdRP) from foreign single-stranded RNA, for example viral, transposon, or other exogenous RNA, activates the DICER enzyme that in

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turn generates siNA duplexes. Alternately, synthetic or expressed siNA can be introduced directly into a cell by appropriate means. An active siNA complex forms which recognizes a target RNA, resulting in degradation of the target RNA by the RISC endonuclease complex or in the synthesis of additional RNA by RNA-dependent RNA polymerase (RdRP), which can activate DICER and result in additional siNA molecules, thereby amplifying the RNAi response.

Figure 4A-F shows non-limiting examples of chemically-modified siNA constructs of the present invention. In the figure, N stands for any nucleotide (adenosine, guanosine, cytosine, uridine, or optionally thymidine, for example thymidine can be substituted in the overhanging regions designated by parenthesis (N N). Various modifications are shown for the sense and antisense strands of the siNA constructs.

Figure 4A: The sense strand comprises 21 nucleotides wherein the two terminal 3'-nucleotides are optionally base paired and wherein all nucleotides present are ribonucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety wherein the two terminal 3'-nucleotides are optionally complementary to the target RNA sequence, and wherein all nucleotides present are ribonucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal 20 bases, or other chemical modifications described herein. A modified internucleotide linkage, such as a phosphorothioate, phosphorodithioate or other modified internucleotide linkage as described herein, shown as "s", optionally connects the (N N) nucleotides in the antisense strand.

Figure 4B: The sense strand comprises 21 nucleotides wherein the two terminal 3'-nucleotides are optionally base paired and wherein all pyrimidine nucleotides that may be present are 2'deoxy-2'-fluoro modified nucleotides and all purine nucleotides that may be present are 2'-O-methyl modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety and wherein the two terminal 3'nucleotides are optionally complementary to the target RNA sequence, and wherein all

pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides and all purine nucleotides that may be present are 2'-O-methyl modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. A modified internucleotide linkage, such as a phosphorothioate, phosphorothioate or other modified internucleotide linkage as described herein, shown as "s", optionally connects the (N N) nucleotides in the sense and antisense strand.

Figure 4C: The sense strand comprises 21 nucleotides having 5'- and 3'- terminal cap moieties wherein the two terminal 3'-nucleotides are optionally base paired and wherein all pyrimidine nucleotides that may be present are 2'-O-methyl or 2'-deoxy-2'-fluoro modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety and wherein the two terminal 3'-nucleotides are optionally complementary to the target RNA sequence, and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. A modified internucleotide linkage, such as a phosphorothioate, phosphorodithioate or other modified internucleotide linkage as described herein, shown as "s", optionally connects the (N N) nucleotides in the antisense strand.

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Figure 4D: The sense strand comprises 21 nucleotides having 5'- and 3'- terminal cap moieties wherein the two terminal 3'-nucleotides are optionally base paired and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein and wherein and all purine nucleotides that may be present are 2'-deoxy nucleotides. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety and wherein the two terminal 3'-nucleotides are optionally complementary to the target RNA sequence, wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides and all purine nucleotides that may be present are

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2'-O-methyl modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. A modified internucleotide linkage, such as a phosphorothioate, phosphorodithioate or other modified internucleotide linkage as described herein, shown as "s", optionally connects the (N N) nucleotides in the antisense strand.

Figure 4E: The sense strand comprises 21 nucleotides having 5'- and 3'- terminal cap moieties wherein the two terminal 3'-nucleotides are optionally base paired and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety and wherein the two terminal 3'-nucleotides are optionally complementary to the target RNA sequence, and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides and all purine nucleotides that may be present are 2'-O-methyl modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein. A modified internucleotide linkage, such as a phosphorothioate, phosphorodithioate or other modified internucleotide linkage as described herein, shown as "s", optionally connects the (N N) nucleotides in the antisense strand.

Figure 4F: The sense strand comprises 21 nucleotides having 5'- and 3'- terminal cap moieties wherein the two terminal 3'-nucleotides are optionally base paired and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides except for (N N) nucleotides, which can comprise ribonucleotides, deoxynucleotides, universal bases, or other chemical modifications described herein and wherein and all purine nucleotides that may be present are 2'-deoxy nucleotides. The antisense strand comprises 21 nucleotides, optionally having a 3'-terminal glyceryl moiety and wherein the two terminal 3'-nucleotides are optionally complementary to the target RNA sequence, and having one 3'-terminal phosphorothioate internucleotide linkage and wherein all pyrimidine nucleotides that may be present are 2'-deoxy-2'-fluoro modified nucleotides and all purine nucleotides that may be present are 2'-deoxy nucleotides except for (N N) nucleotides, which can comprise ribonucleotides

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deoxynucleotides, universal bases, or other chemical modifications described herein. A
modified internucleotide linkage, such as a phosphorothioate, phosphorothitoate or
other modified internucleotide linkage as described herein, shown as "s", optionally
connects the (N N) nucleotides in the antisense strand. The antisense strand of
constructs A-F comprise sequence complementary to any target nucleic acid sequence of
the invention. Furthermore, when a glyceryl moiety (L) is present at the 3'-end of the
antisense strand for any construct shown in Figure 4 A-F, the modified internucleotide
linkage is optional.

Figure 5A-F shows non-limiting examples of specific chemically-modified siNA

sequences of the invention. A-F applies the chemical modifications described in Figure

4A-F to a target siNA sequence. Such chemical modifications can be applied to any
target sequence and/or target polymorphism sequence.

Figure 6 shows non-limiting examples of different siNA constructs of the invention. The examples shown (constructs 1, 2, and 3) have 19 representative base pairs; however, different embodiments of the invention include any number of base pairs described herein. Bracketed regions represent nucleotide overhangs, for example, comprising about 1, 2, 3, or 4 nucleotides in length, preferably about 2 nucleotides. Constructs 1 and 2 can be used independently for RNAi activity. Construct 2 can comprise a polynucleotide or non-nucleotide linker, which can optionally be designed as a biodegradable linker. In one embodiment, the loop structure shown in construct 2 can comprise a biodegradable linker that results in the formation of construct 1 in vivo and/or in vitro. In another example, construct 3 can be used to generate construct 2 under the same principle wherein a linker is used to generate the active sinA construct 2 in vivo and/or in vitro, which can optionally utilize another biodegradable linker to generate the active sinA construct 1 in vivo and/or in vitro. As such, the stability and/or activity of the sinA constructs can be modulated based on the design of the sinA construct for use in vivo or in vitro and/or in vitro.

Figure 7A-C is a diagrammatic representation of a scheme utilized in generating an expression cassette to generate siNA hairpin constructs.

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Figure 7A: A DNA oligomer is synthesized with a 5'-restriction site (R1) sequence followed by a region having sequence identical (sense region of siNA) to a predetermined target sequence, wherein the sense region comprises, for example, about 19, 20, 21, or 22 nucleotides (N) in length, which is followed by a loop sequence of defined sequence (X), comprising, for example, about 3 to about 10 nucleotides.

Figure 7B: The synthetic construct is then extended by DNA polymerase to generate a hairpin structure having self-complementary sequence that will result in a siNA transcript having specificity for a target sequence and having self-complementary sense and antisense regions.

Figure 7C: The construct is heated (for example to about 95°C) to linearize the sequence, thus allowing extension of a complementary second DNA strand using a primer to the 3'-restriction sequence of the first strand. The double-stranded DNA is then inserted into an appropriate vector for expression in cells. The construct can be designed such that a 3'-terminal nucleotide overhang results from the transcription, for example, by engineering restriction sites and/or utilizing a poly-U termination region as described in Paul et al., 2002, Nature Biotechnology, 29, 505-508.

Figure 8A-C is a diagrammatic representation of a scheme utilized in generating an expression cassette to generate double-stranded siNA constructs.

Figure 8A: A DNA oligomer is synthesized with a 5'-restriction (R1) site sequence followed by a region having sequence identical (sense region of siNA) to a predetermined target sequence, wherein the sense region comprises, for example, about 19, 20, 21, or 22 nucleotides (N) in length, and which is followed by a 3'-restriction site (R2) which is adjacent to a loop sequence of defined sequence (X).

Figure 8B: The synthetic construct is then extended by DNA polymerase to generate a hairoin structure having self-complementary sequence.

Figure 8C: The construct is processed by restriction enzymes specific to R1 and R2 to generate a double-stranded DNA which is then inserted into an appropriate vector for expression in cells. The transcription cassette is designed such that a U6 promoter region flanks each side of the dsDNA which generates the separate sense and antisense

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strands of the siNA. Poly T termination sequences can be added to the constructs to generate U overhangs in the resulting transcript.

Figure 9A-E is a diagrammatic representation of a method used to determine target sites for siNA mediated RNAi within a particular target nucleic acid sequence, such as messenger RNA.

Figure 9A: A pool of siNA oligonucleotides are synthesized wherein the antisense region of the siNA constructs has complementarily to target sites across the target nucleic acid sequence, and wherein the sense region comprises sequence complementary to the antisense region of the siNA.

Figure 9B&C: (Figure 9B) The sequences are pooled and are inserted into vectors such that (Figure 9C) transfection of a vector into cells results in the expression of the siNA.

Figure 9D: Cells are sorted based on phenotypic change that is associated with modulation of the target nucleic acid sequence.

15 Figure 9E: The siNA is isolated from the sorted cells and is sequenced to identify efficacious target sites within the target nucleic acid sequence.

Figure 10 shows non-limiting examples of different stabilization chemistries (110) that can be used, for example, to stabilize the 3'-end of siNA sequences of the invention, including (1) [3-3']-inverted deoxyribose; (2) deoxyribonucleotide; (3) [5'-3']-3'-deoxyribonucleotide; (4) [5'-3']-ribonucleotide; (5) [5'-3']-3'-O-methyl ribonucleotide; (6) 3'-glyceryl; (7) [3'-5']-3'-deoxyribonucleotide; (8) [3'-3']-deoxyribonucleotide; (9) [5'-2']-deoxyribonucleotide; and (10) [5-3']-dideoxyribonucleotide. In addition to modified and unmodified backbone chemistries indicated in the figure, these chemistries can be combined with different backbone modifications as described herein, for example, backbone modifications having Formula I. In addition, the 2'-deoxyr nucleotide shown 5' to the terminal modifications shown can be another modified or unmodified nucleotide or non-nucleotide described herein, for example modifications having any of Formulae I-VII or any combination thereof.

Figure 11 shows a non-limiting example of a strategy used to identify chemically modified siNA constructs of the invention that are nuclease resistance while preserving the ability to mediate RNAi activity. Chemical modifications are introduced into the siNA construct based on educated design parameters (e.g. introducing 2'-mofications, base modifications, backbone modifications, terminal cap modifications etc). The modified construct in tested in an appropriate system (e.g. human serum for nuclease resistance, shown, or an animal model for PK/delivery parameters). In parallel, the siNA construct is tested for RNAi activity, for example in a cell culture system such as a luciferase reporter assay). Lead siNA constructs are then identified which possess a further modified and assayed once again. This same approach can be used to identify siNA-conjugate molecules with improved pharmacokinetic profiles, delivery, and RNAi activity, and Alvai activity.

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Figure 12 shows non-limiting examples of phosphorylated siNA molecules of the invention, including linear and duplex constructs and asymmetric derivatives thereof.

Figure 13 shows non-limiting examples of chemically modified terminal phosphate groups of the invention.

Figure 14A shows a non-limiting example of methodology used to design self complementary DFO constructs utilizing palidrome and/or repeat nucleic acid sequences that are identified in a target nucleic acid sequence. (i) A palindrome or repeat sequence is identified in a nucleic acid target sequence. (ii) A sequence is designed that is complementary to the target nucleic acid sequence and the palindrome sequence. (iii) An inverse repeat sequence of the non-palindrome/repeat portion of the complementary sequence is appended to the 3'-end of the complementary sequence to generate a self complementary DFO molecule comprising sequence complementary to the nucleic acid target. (iv) The DFO molecule can self-assemble to form a double stranded oligonucleotide. Figure 14B shows a non-limiting representative example of a duplex forming oligonucleotide sequence. Figure 14C shows a non-limiting example of the self assembly schematic of a representative duplex forming oligonucleotide sequence. Figure 14D shows a non-limiting example of the self assembly schematic of a representative duplex forming oligonucleotide sequence. Figure 14D shows a non-limiting example of the self assembly schematic of a representative duplex forming oligonucleotide sequence.

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Figure 15 shows a non-limiting example of the design of self complementary DFO constructs utilizing palidrome and/or repeat nucleic acid sequences that are incorporated into the DFO constructs that have sequence complementary to any target nucleic acid sequence of interest. Incorporation of these palindrome/repeat sequences allow the design of DFO constructs that form duplexes in which each strand is capable of mediating modulation of target gene expression, for example by RNAi. First, the target sequence is identified. A complementary sequence is then generated in which nucleotide or non-nucleotide modifications (shown as X or Y) are introduced into the complementary sequence that generate an artificial palindrome (shown as XYXYXY in the Figure). An inverse repeat of the non-palindrome/repeat complementary sequence is appended to the 3'-end of the complementary sequence to generate a self complementary DFO comprising sequence complementary to the nucleic acid target. The DFO can selfassemble to form a double stranded oligonucleotide.

Figure 16 shows non-limiting examples of multifunctional siNA molecules of the invention comprising two separate polynucleotide sequences that are each capable of mediating RNAi directed cleavage of differing target nucleic acid sequences. Figure 16A shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the first and second complementary regions are situated at the 3'-ends of each polynucleotide sequence in the multifunctional siNA. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. Figure 16B shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the first and second complementary regions are situated at the 5'-ends of each polynucleotide sequence in the multifunctional siNA. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences.

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Figure 17 shows non-limiting examples of multifunctional siNA molecules of the invention comprising a single polynucleotide sequence comprising distinct regions that are each capable of mediating RNAi directed cleavage of differing target nucleic acid sequences. Figure 17A shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the second complementary region is situated at the 3'-end of the polynucleotide sequence in the multifunctional siNA. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. Figure 17B shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the first complementary region is situated at the 5'-end of the polynucleotide sequence in the multifunctional siNA. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. In one embodiment, these multifunctional siNA constructs are processed in vivo or in vitro to generate multifunctional siNA constructs as shown in Figure 16.

Figure 18 shows non-limiting examples of multifunctional siNA molecules of the invention comprising two separate polynucleotide sequences that are each capable of mediating RNAi directed cleavage of differing target nucleic acid sequences and wherein the multifunctional siNA construct further comprises a self complementary, palindrome, or repeat region, thus enabling shorter bifuctional siNA constructs that can mediate RNA interference against differing target nucleic acid sequences. Figure 18A shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary regions are situated at the 3'-ends of each polynucleotide sequence in the multifunctional siNA, and

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wherein the first and second complementary regions further comprise a self complementary, palindrome, or repeat region. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. Figure 18B shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the first and second complementary regions are situated at the 5'-ends of each polynucleotide sequence in the multifunctional siNA, and wherein the first and second complementary regions are situated at the first and second complementary regions are situated at the stream of second polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences.

Figure 19 shows non-limiting examples of multifunctional siNA molecules of the invention comprising a single polynucleotide sequence comprising distinct regions that are each capable of mediating RNAi directed cleavage of differing target nucleic acid sequences and wherein the multifunctional siNA construct further comprises a self complementary, palindrome, or repeat region, thus enabling shorter bifuctional siNA constructs that can mediate RNA interference against differing target nucleic acid sequences. Figure 19A shows a non-limiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the second complementary region is situated at the 3'-end of the polynucleotide sequence in the multifunctional siNA, and wherein the first and second complementary regions further comprise a self complementary, palindrome, or repeat region. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. Figure 19B shows a nonlimiting example of a multifunctional siNA molecule having a first region that is complementary to a first target nucleic acid sequence (complementary region 1) and a

second region that is complementary to a second target nucleic acid sequence (complementary region 2), wherein the first complementary region is situated at the 5'-end of the polynucleotide sequence in the multifunctional siNA, and wherein the first and second complementary regions further comprise a self complementary, palindrome, or repeat region. The dashed portions of each polynucleotide sequence of the multifunctional siNA construct have complementarity with regard to corresponding portions of the siNA duplex, but do not have complementarity to the target nucleic acid sequences. In one embodiment, these multifunctional siNA constructs are processed in vivo or in vitro to generate multifunctional siNA constructs as shown in Figure 18.

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Figure 20 shows a non-limiting example of how multifunctional siNA molecules of the invention can target two separate target nucleic acid molecules, such as separate RNA molecules encoding differing proteins, for example, a cytokine and its corresponding receptor, differing viral strains, a virus and a cellular protein involved in viral infection or replication, or differing proteins involved in a common or divergent biologic pathway that is implicated in the maintenance of progression of disease. Each strand of the multifunctional siNA construct comprises a region having complementarity to separate target nucleic acid molecules. The multifunctional siNA molecule is designed such that each strand of the siNA can be utilized by the RISC complex to initiate RNA interference mediated cleavage of its corresponding target. These design parameters can include destabilization of each end of the siNA construct (see for example Schwarz et al., 2003, Cell, 115, 199-208). Such destabilization can be accomplished for example by using guanosine-cytidine base pairs, alternate base pairs (e.g., wobbles), or destabilizing chemically modified nucleotides at terminal nucleotide positions as is known in the art.

Figure 21 shows a non-limiting example of how multifunctional siNA molecules of the invention can target two separate target nucleic acid sequences within the same target nucleic acid molecule, such as alternate coding regions of a RNA, coding and non-coding regions of a RNA, or alternate splice variant regions of a RNA. Each strand of the multifunctional siNA construct comprises a region having complementarity to the separate regions of the target nucleic acid molecule. The multifunctional siNA molecule is designed such that each strand of the siNA can be utilized by the RISC complex to

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initiate RNA interference mediated cleavage of its corresponding target region. These design parameters can include destabilization of each end of the siNA construct (see for example Schwarz et al., 2003, Cell, 115, 199-208). Such destabilization can be accomplished for example by using guanosine-cytidine base pairs, alternate base pairs (e.g., wobbles), or destabilizing chemically modified nucleotides at terminal nucleotide positions as is known in the art.

#### DETAILED DESCRIPTION OF THE INVENTION

#### Mechanism of Action of Nucleic Acid Molecules of the Invention

The discussion that follows discusses the proposed mechanism of RNA interference mediated by short interfering RNA as is presently known, and is not meant to be limiting and is not an admission of prior art. Applicant demonstrates herein that chemically-modified short interfering nucleic acids possess similar or improved capacity to mediate RNAi as do siRNA molecules and are expected to possess improved stability and activity hvbo; therefore, this discussion is not meant to be limiting only to siRNA and can be applied to siNA as a whole. By "improved capacity to mediate RNAi" or "improved RNAi activity" is meant to include RNAi activity measured in vitro and/or in vivo where the RNAi activity is a reflection of both the ability of the siNA to mediate RNAi and the stability of the siNAs of the invention. In this invention, the product of these activities can be increased in vitro and/or In vivo compared to an all RNA siRNA or a siNA containing a plurality of ribonucleotides. In some cases, the activity or stability of the siNA molecule can be decreased (i.e., less than ten-fold), but the overall activity of the siNA molecule is enhanced in vitro and/or in vivo.

RNA interference refers to the process of sequence specific post-transcriptional gene silencing in animals mediated by short interfering RNAs (siRNAs) (Fire et al., 1998, Nature, 391, 806). The corresponding process in plants is commonly referred to as post-transcriptional gene silencing or RNA silencing and is also referred to as quelling in fungi. The process of post-transcriptional gene silencing is thought to be an evolutionarily-conserved cellular defense mechanism used to prevent the expression of foreign genes which is commonly shared by diverse flora and phyla (Fire et al., 1999, Trends Genet., 15, 358). Such protection from foreign gene expression may have

evolved in response to the production of double-stranded RNAs (dsRNAs) derived from viral infection or the random integration of transposon elements into a host genome via a cellular response that specifically destroys homologous single-stranded RNA or viral genomic RNA. The presence of dsRNA in cells triggers the RNAi response though a mechanism that has yet to be fully characterized. This mechanism appears to be different from the interferon response that results from dsRNA-mediated activation of protein kinase PKR and 2', 5'-oligoadenylate synthetase resulting in non-specific cleavage of rnRNA by ribonuclease L.

The presence of long dsRNAs in cells stimulates the activity of a ribonuclease III enzyme referred to as Dicer. Dicer is involved in the processing of the dsRNA into short 10 pieces of dsRNA known as short interfering RNAs (siRNAs) (Berstein et al., 2001, Nature, 409, 363). Short interfering RNAs derived from Dicer activity are typically about 21 to about 23 nucleotides in length and comprise about 19 base pair duplexes. Dicer has also been implicated in the excision of 21- and 22-nucleotide small temporal RNAs (stRNAs) from precursor RNA of conserved structure that are implicated in 15 translational control (Hutvagner et al., 2001, Science, 293, 834). The RNAi response also features an endonuclease complex containing a siRNA, commonly referred to as an RNA-induced silencing complex (RISC), which mediates cleavage of single-stranded RNA having sequence homologous to the siRNA. Cleavage of the target RNA takes 20 place in the middle of the region complementary to the guide sequence of the siRNA duplex (Elbashir et al., 2001, Genes Dev., 15, 188). In addition, RNA interference can also involve small RNA (e.g., micro-RNA or miRNA) mediated gene silencing, presumably though cellular mechanisms that regulate chromatin structure and thereby prevent transcription of target gene sequences (see for example Allshire, 2002, Science, 297, 1818-1819; Volpe et al., 2002, Science, 297, 1833-1837; Jenuwein, 2002, Science, 297, 2215-2218; and Hall et al., 2002, Science, 297, 2232-2237). As such, siNA molecules of the invention can be used to mediate gene silencing via interaction with RNA transcripts or alternately by interaction with particular gene sequences, wherein such interaction results in gene silencing either at the transcriptional level or post-30 transcriptional level.

RNAi has been studied in a variety of systems. Fire et al., 1998, Nature, 391, 806, were the first to observe RNAi in C. elegans. Wianny and Goetz, 1999, Nature Cell Biol., 2, 70, describe RNAi mediated by dsRNA in mouse embryos. Hammond et al., 2000, Nature, 404, 293, describe RNAi in Drosophila cells transfected with dsRNA. Elbashir et al., 2001, Nature, 411, 494, describe RNAi induced by introduction of duplexes of synthetic 21-nucleotide RNAs in cultured mammalian cells including human embryonic kidney and HeLa cells. Recent work in Drosophila embryonic lysates has revealed certain requirements for siRNA length, structure, chemical composition, and sequence that are essential to mediate efficient RNAi activity. These studies have shown that 21 nucleotide siRNA duplexes are most active when containing two 2-nucleotide 3'terminal nucleotide overhangs. Furthermore, substitution of one or both siRNA strands with 2'-deoxy or 2'-O-methyl nucleotides abolishes RNAi activity, whereas substitution of 3'-terminal siRNA nucleotides with deoxy nucleotides was shown to be tolerated. Mismatch sequences in the center of the siRNA duplex were also shown to abolish RNAi activity. In addition, these studies also indicate that the position of the cleavage site in the target RNA is defined by the 5'-end of the siRNA guide sequence rather than the 3'end (Elbashir et al., 2001, EMBO J., 20, 6877). Other studies have indicated that a 5'phosphate on the target-complementary strand of a siRNA duplex is required for siRNA activity and that ATP is utilized to maintain the 5'-phosphate moiety on the siRNA (Nykanen et al., 2001, Cell, 107, 309); however, siRNA molecules lacking a 5'-20 phosphate are active when introduced exogenously, suggesting that 5'-phosphorylation of siRNA constructs may occur in vivo.

# Synthesis of Nucleic Acid Molecules

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Synthesis of nucleic acids greater than 100 nucleotides in length is difficult using automated methods, and the therapeutic cost of such molecules is prohibitive. In this invention, small nucleic acid motifs ("small" refers to nucleic acid motifs no more than 100 nucleotides in length, preferably no more than 80 nucleotides in length, and most preferably no more than 50 nucleotides in length, e.g., individual siNA oligonucleotide sequences or siNA sequences synthesized in tandem) are preferably used for exogenous delivery. The simple structure of these molecules increases the ability of the nucleic acid

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to invade targeted regions of protein and/or RNA structure. Exemplary molecules of the instant invention are chemically synthesized, and others can similarly be synthesized.

Oligonucleotides (e.g., certain modified oligonucleotides or portions of oligonucleotides lacking ribonucleotides) are synthesized using protocols known in the 5 art, for example as described in Caruthers et al., 1992, Methods in Enzymology 211, 3-19, Thompson et al., International PCT Publication No. WO 99/54459, Wincott et al., 1995, Nucleic Acids Res. 23, 2677-2684, Wincott et al., 1997, Methods Mol. Bio., 74, 59, Brennan et al., 1998, Biotechnol Bioeng., 61, 33-45, and Brennan, U.S. Pat. No. 6,001,311. All of these references are incorporated herein by reference. The synthesis of oligonucleotides makes use of common nucleic acid protecting and coupling groups, such as dimethoxytrityl at the 5'-end, and phosphoramidites at the 3'-end. In a nonlimiting example, small scale syntheses are conducted on a 394 Applied Biosystems, Inc. synthesizer using a 0.2 µmol scale protocol with a 2.5 min coupling step for 2'-Omethylated nucleotides and a 45 second coupling step for 2'-deoxy nucleotides or 2'-15 deoxy-2'-fluoro nucleotides. Table III outlines the amounts and the contact times of the reagents used in the synthesis cycle. Alternatively, syntheses at the 0.2 µmol scale can be performed on a 96-well plate synthesizer, such as the instrument produced by Protogene (Palo Alto, CA) with minimal modification to the cycle. A 33-fold excess (60 μL of 0.11 M = 6.6 μmol) of 2'-O-methyl phosphoramidite and a 105-fold excess of Sethyl tetrazole (60  $\mu$ L of 0.25 M = 15  $\mu$ mol) can be used in each coupling cycle of 2'-O-20 methyl residues relative to polymer-bound 5'-hydroxyl. A 22-fold excess (40 µL of 0.11 M = 4.4 umol) of deoxy phosphoramidite and a 70-fold excess of S-ethyl tetrazole (40  $\mu$ L of 0.25 M = 10  $\mu$ mol) can be used in each coupling cycle of deoxy residues relative to polymer-bound 5'-hydroxyl. Average coupling yields on the 394 Applied Biosystems, Inc. synthesizer, determined by colorimetric quantitation of the trityl fractions, are 25 typically 97.5-99%. Other oligonucleotide synthesis reagents for the 394 Applied Biosystems, Inc. synthesizer include the following: detritylation solution is 3% TCA in methylene chloride (ABI); capping is performed with 16% N-methyl imidazole in THF (ABI) and 10% acetic anhydride/10% 2,6-lutidine in THF (ABI); and oxidation solution is 16.9 mM I<sub>2</sub>, 49 mM pyridine, 9% water in THF (PerSeptive Biosystems, Inc.). 30 Burdick & Jackson Synthesis Grade acetonitrile is used directly from the reagent bottle. S-Ethyltetrazole solution (0.25 M in acetonitrile) is made up from the solid obtained

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from American International Chemical, Inc. Alternately, for the introduction of phosphorothioate linkages, Beaucage reagent (3H-1,2-Benzodithiol-3-one 1,1-dioxide, 0.05 M in acetonitrile) is used.

Deprotection of the DNA-based oligonucleotides is performed as follows: the polymer-bound trityl-on oligoribonucleotide is transferred to a 4 mL glass screw top vial and suspended in a solution of 40% aqueous methylamine (1 mL) at 65 °C for 10 minutes. After cooling to -20 °C, the supernatant is removed from the polymer support. The support is washed three times with 1.0 mL of EtOH:MeCN:H2O/3:1:1, vortexed and the supernatant is then added to the first supernatant. The combined supernatants, occurring the oligoribonucleotide, are dried to a white powder.

The method of synthesis used for RNA including certain siNA molecules of the invention follows the procedure as described in Usman et al., 1987, J. Am. Chem. Soc., 109, 7845; Scaringe et al., 1990, Nucleic Acids Res., 18, 5433; and Wincott et al., 1995, Nucleic Acids Res. 23, 2677-2684 Wincott et al., 1997, Methods Mol. Bio., 74, 59, and makes use of common nucleic acid protecting and coupling groups, such as dimethoxytrityl at the 5'-end, and phosphoramidites at the 3'-end. In a non-limiting example, small scale syntheses are conducted on a 394 Applied Biosystems, Inc. synthesizer using a 0.2 µmol scale protocol with a 7.5 min coupling step for alkylsilyl protected nucleotides and a 2.5 min coupling step for 2'-O-methylated nucleotides. Table III outlines the amounts and the contact times of the reagents used in the synthesis cycle. Alternatively, syntheses at the 0.2 µmol scale can be done on a 96-well plate synthesizer, such as the instrument produced by Protogene (Palo Alto, CA) with minimal modification to the cycle. A 33-fold excess (60  $\mu$ L of 0.11 M = 6.6  $\mu$ mol) of 2'-Omethyl phosphoramidite and a 75-fold excess of S-ethyl tetrazole (60  $\mu$ L of 0.25 M = 15 umol) can be used in each coupling cycle of 2'-O-methyl residues relative to polymerbound 5'-hydroxyl. A 66-fold excess (120 µL of 0.11 M = 13.2 µmol) of alkylsilyl (ribo) protected phosphoramidite and a 150-fold excess of S-ethyl tetrazole (120 µL of 0.25 M = 30 µmol) can be used in each coupling cycle of ribo residues relative to polymerbound 5'-hydroxyl. Average coupling yields on the 394 Applied Biosystems, Inc. synthesizer, determined by colorimetric quantitation of the trityl fractions, are typically 97.5-99%. Other oligonucleotide synthesis reagents for the 394 Applied Biosystems,

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Inc. synthesizer include the following: detritylation solution is 3% TCA in methylene chloride (ABI); capping is performed with 16% N-methyl imidazole in THF (ABI) and 10% acetic anhydride/10% 2,6-Iutidine in THF (ABI); oxidation solution is 16.9 mM I<sub>2</sub>, 49 mM pyridine, 9% water in THF (PerSeptive Biosystems, Inc.). Burdick & Jackson Synthesis Grade acetonitrile is used directly from the reagent bottle. S-Ethyltetrazole solution (0.25 M in acetonitrile) is made up from the solid obtained from American International Chemical, Inc. Alternately, for the introduction of phosphorothioate linkages, Beaucage reagent (3H-1,2-Benzodithiol-3-one 1,1-dioxide0.05 M in acetonitrile) is used.

Deprotection of the RNA is performed using either a two-pot or one-pot protocol. For the two-pot protocol, the polymer-bound trityl-on oligoribonucleotide is transferred to a 4 mL glass screw top vial and suspended in a solution of 40% aq. methylamine (1 mL) at 65 °C for 10 min. After cooling to -20 °C, the supernatant is removed from the polymer support. The support is washed three times with 1.0 mL of EtOH:McCN:H2O/3:1:1, vortexed and the supernatant is then added to the first supernatant. The combined supernatants, containing the oligoribonucleotide, are dried to a white powder. The base deprotected oligoribonucleotide is resuspended in analydrous TEA/HF/NMP solution (300  $\mu$ L of a solution of 1.5 mL N-methylpyrrolidinone, 750  $\mu$ L TEA and 1 mL TEA+3HF to provide a 1.4 M HF concentration) and heated to 65 °C. After 1.5 h, the oligomer is quenched with 1.5 M NH4HCO<sub>3</sub>.

Alternatively, for the one-pot protocol, the polymer-bound trityl-on oligoribonucleotide is transferred to a 4 mL glass screw top vial and suspended in a solution of 33% ethanolic methylamine/DMSO: 1/1 (0.8 mL) at 65 °C for 15 minutes.

The vial is brought to room temperature TEA+3HF (0.1 mL) is added and the vial is beated at 65 °C for 15 minutes. The sample is cooled at -20 °C and then quenched with 1.5 M NH<sub>6</sub>HCO<sub>3</sub>.

For purification of the trityl-on oligomers, the quenched NH<sub>4</sub>HCO<sub>3</sub> solution is loaded onto a C-18 containing cartridge that had been prewashed with acetonitrile followed by 50 mM TEAA. After washing the loaded cartridge with water, the RNA is detritylated with 0.5% TFA for 13 minutes. The cartridge is then washed again with

water, salt exchanged with 1 M NaCl and washed with water again. The oligonucleotide is then eluted with 30% acetonitrile.

The average stepwise coupling yields are typically >98% (Wincott et al., 1995
Nucleic Acids Res. 23, 2677-2684). Those of ordinary skill in the art will recognize that
the scale of synthesis can be adapted to be larger or smaller than the example described
above including but not limited to 96-well format.

Alternatively, the nucleic acid molecules of the present invention can be synthesized separately and joined together post-synthetically, for example, by ligation (Moore et al., 1992, Science 256, 9923; Draper et al., International PCT publication No. WO 93/23569; Shabarova et al., 1991, Nucleic Acids Research 19, 4247; Bellon et al., 1997, Nucleosides & Nucleotides, 16, 951; Bellon et al., 1997, Bioconjugate Chem. 8, 204), or by hybridization following synthesis and/or deprotection.

The siNA molecules of the invention can also be synthesized via a tandem synthesis methodology as described in Example 1 herein, wherein both siNA strands are synthesized as a single contiguous oligonucleotide fragment or strand separated by a cleavable linker which is subsequently cleaved to provide separate siNA fragments or strands that hybridize and permit purification of the siNA duplex. The linker can be a polynucleotide linker or a non-nucleotide linker. The tandem synthesis of siNA as described herein can be readily adapted to both multiwell/multiplate synthesis of siNA as described herein can also be readily adapted to large scale synthesis platforms employing batch reactors, synthesis columns and the like.

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A siNA molecule can also be assembled from two distinct nucleic acid strands or fragments wherein one fragment includes the sense region and the second fragment includes the antisense region of the RNA molecule.

The nucleic acid molecules of the present invention can be modified extensively to enhance stability by modification with nuclease resistant groups, for example, 2-amino, 2'-C-allyl, 2'-fluoro, 2'-C-methyl, 2'-H (for a review see Usman and Cedergren, 1992, TIBS 17, 34; Usman et al., 1994, Nucleic Acids Symp. Ser. 31, 163). siNA constructs can be purified by gel electrophoresis using general methods or can be purified by high

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pressure liquid chromatography (HPLC; see Wincott et al., supra, the totality of which is hereby incorporated herein by reference) and re-suspended in water.

In another aspect of the invention, siNA molecules of the invention are expressed from transcription units inserted into DNA or RNA vectors. The recombinant vectors can be DNA plasmids or viral vectors. siNA expressing viral vectors can be constructed based on, but not limited to, adeno-associated virus, retrovirus, adenovirus, or alphavirus. The recombinant vectors capable of expressing the siNA molecules can be delivered as described herein, and persist in target cells. Alternatively, viral vectors can be used that provide for transient expression of siNA molecules.

### 10 Optimizing Activity of the nucleic acid molecule of the invention.

Chemically synthesizing nucleic acid molecules with modifications (base, sugar and/or phosphate) can prevent their degradation by serum ribonucleases, which can increase their potency (see e.g., Eckstein et al., International Publication No. WO 92/07065; Perrault et al., 1990 Nature 344, 565; Pieken et al., 1991, Science 253, 314; Usman and Cedergren, 1992, Trerids in Biochem. Scl. 17, 334; Usman et al., International Publication No. WO 93/15187; and Rossi et al., International Publication No. WO 93/15187; and Rossi et al., International Publication No. WO 91/03162; Sproat, U.S. Pat. No. 5,334,711; Gold et al., U.S. Pat. No. 6,300,074; and Burgin et al., supra; all of which are incorporated by reference herein). All of the above references describe various chemical modifications that can be made to the base, phosphate and/or sugar moieties of the nucleic acid molecules described herein. Modifications that enhance their effica cy in cells, and removal of bases from nucleic acid molecules to shorten oligonucleotide synthesis times and reduce chemical requirements are desired.

There are several examples in the art describing sugar, base and phosphate modifications that can be introduced into nucleic acid molecules with significant enhancement in their nuclease stability and efficacy. For example, oligonucleotides are modified to enhance stability and/or enhance biological activity by modification with nuclease resistant groups, for example, 2'-amino, 2'-C-allyl, 2'-fluoro, 2'-O-methyl, 2'-O-1, nucleotide base modifications (for a review see Usman and Cedergren, 1992, 1788, 17, 34: Usman et al., 1994, Nucleic Acids Symp. Ser. 31, 163; Burgin et al., 1996,

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Biochemistry, 35, 14090). Sugar modification of nucleic acid molecules have been

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extensively described in the art (see Eckstein et al., International Publication PCT No. WO 92/07065; Perrault et al. Nature, 1990, 344, 565-568; Pieken et al. Science, 1991, 253, 314-317; Usman and Cedergren, Trends in Biochem. Sci., 1992, 17, 334-339; 5 Usman et al. International Publication PCT No. WO 93/15187; Sproat, U.S. Pat. No. 5,334,711 and Beigelman et al., 1995, J. Biol. Chem., 270, 25702; Beigelman et al., International PCT publication No. WO 97/26270; Beigelman et al., U.S. Pat. No. 5,716,824; Usman et al., U.S. Pat. No. 5,627,053; Woolf et al., International PCT Publication No. WO 98/13526; Thompson et al., USSN 60/082,404 which was filed on April 20, 1998; Karpejsky et al., 1998, Tetrahedron Lett., 39, 1131; Earnshaw and Gait, 1998, Biopolymers (Nucleic Acid Sciences), 48, 39-55; Verma and Eckstein, 1998, Annu. Rev. Biochem., 67, 99-134; and Burlina et al., 1997, Bioorg. Med. Chem., 5, 1999-2010; all of the references are hereby incorporated in their totality by reference herein). Such publications describe general methods and strategies to determine the location of incorporation of sugar, base and/or phosphate modifications and the like into nucleic acid molecules without modulating catalysis, and are incorporated by reference herein. In view of such teachings, similar modifications can be used as described herein to modify the siNA nucleic acid molecules of the instant invention so long as the ability of siNA to promote RNAi is cells is not significantly inhibited.

While chemical modification of oligonucleotide internucleotide linkages with phosphorothioate, phosphorodithioate, and/or 5'-methylphosphonate linkages improves stability, excessive modifications can cause some toxicity or decreased activity. Therefore, when designing nucleic acid molecules, the amount of these internucleotide linkages should be minimized. The reduction in the concentration of these linkages should lower toxicity, resulting in increased efficacy and higher specificity of these molecules.

Short interfering nucleic acid (siNA) molecules having chemical modifications that maintain or enhance activity are provided. Such a nucleic acid is also generally more resistant to nucleases than an unmodified nucleic acid. Accordingly, the in vitro and/or in vivo activity should not be significantly lowered. In cases in which modulation is the goal, therapeutic nucleic acid molecules delivered exogenously should optimally be

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stable within cells until translation of the target RNA has been modulated long enough to reduce the levels of the undesirable protein. This period of time varies between hours to days depending upon the disease state. Improvements in the chemical synthesis of RNA and DNA (Wincott et al., 1995, Nucleic Acids Res. 23, 2677; Caruthers et al., 1992, Methods in Enzymology 211, 3-19 (incorporated by reference herein)) have expanded the ability to modify nucleic acid molecules by introducing nucleotide modifications to enhance their nuclease stability, as described above.

In one embodiment, nucleic acid molecules of the invention include one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) G-clamp nucleotides. A G-clamp nucleotide is a modified cytosine analog wherein the modifications confer the ability to hydrogen bond both Watson-Crick and Hoogsteen faces of a complementary guanine within a duplex, see for example Lin and Matteucci, 1998, J. Am. Chem. Soc., 120, 8531-8532. A single G-clamp analog substitution within an oligonucleotide can result in substantially enhanced helical thermal stability and mismatch discrimination when hybridized to complementary oligonucleotides. The inclusion of such nucleotides in nucleic acid molecules of the invention results in both enhanced affinity and specificity to nucleic acid targets, complementary sequences, or template strands. In another embodiment, nucleic acid molecules of the invention include one or more (e.g., about 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, or more) LNA "locked nucleic acid" nucleotides such as a 2', 4'-C methylene bicyclo nucleotide (see for example Wengel et al., International PCT Publication No. WO 00/66604 and WO 99/14226).

In another embodiment, the invention features conjugates and/or complexes of siNA molecules of the invention. Such conjugates and/or complexes can be used to facilitate delivery of siNA molecules into a biological system, such as a cell. The conjugates and complexes provided by the instant invention can impart therapeutic activity by transferring therapeutic compounds across cellular membranes, altering the pharmacokinetics, and/or modulating the localization of nucleic acid molecules of the invention. The present invention encompasses the design and synthesis of novel conjugates and complexes for the delivery of molecules, including, but not limited to, small molecules, lipids, cholesterol, phospholipids, nucleosides, nucleotides, nucleic acids, antibodies, toxins, negatively charged polymers and other polymers, for example

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proteins, peptides, hormones, carbobydrates, polyethylene glycols, or polyamines, across cellular membranes. In general, the transporters described are designed to be used either individually or as part of a multi-component system, with or without degradable linkers. These compounds are expected to improve delivery and/or localization of nucleic acid molecules of the invention into a number of cell types originating from different tissues, in the presence or absence of serum (see Sullenger and Cech, U.S. Pat. No. 5,854,038). Conjugates of the molecules described herein can be attached to biologically active molecules via linkers that are biodegradable, such as biodegradable nucleic acid linker molecules.

The term "biodegradable linker" as used herein, refers to a nucleic acid or nonnucleic acid linker molecule that is designed as a biodegradable linker to connect one molecule to another molecule, for example, a biologically active molecule to a siNA molecule of the invention or the sense and antisense strands of a siNA molecule of the invention. The biodegradable linker is designed such that its stability can be modulated for a particular purpose, such as delivery to a particular tissue or cell type. The stability of a nucleic acid-based biodegradable linker molecule can be modulated by using various chemistries, for example combinations of ribonucleotides, deoxyribonucleotides, and chemically-modified nucleotides, such as 2'-O-methyl, 2'-fluoro, 2'-amino, 2'-O-amino, 2'-C-allyl, 2'-O-allyl, and other 2'-modified or base modified nucleotides. The biodegradable nucleic acid linker molecule can be a dimer, trimer, tetramer or longer nucleic acid molecule, for example, an oligonucleotide of about 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, or 20 nucleotides in length, or can comprise a single nucleotide with a phosphorus-based linkage, for example, a phosphoramidate or phosphodiester linkage. The biodegradable nucleic acid linker molecule can also comprise nucleic acid backbone, nucleic acid sugar, or nucleic acid base modifications.

The term "biodegradable" as used herein, refers to degradation in a biological system, for example, enzymatic degradation or chemical degradation.

The term "biologically active molecule" as used herein refers to compounds or molecules that are capable of eliciting or modifying a biological response in a system. Non-limiting examples of biologically active siNA molecules either alone or in combination with other molecules contemplated by the instant invention include

therapeutically active molecules such as antibodies, cholesterol, hormones, antivirals, peptides, proteins, chemotherapeutics, small molecules, vitamins, co-factors, nucleosides, nucleotides, oligonucleotides, enzymatic nucleic acids, antisense nucleic acids, triplex forming oligonucleotides, 2,5-A chimeras, siNA, dsRNA, allozymes, aptamers, decoys and analogs thereof. Biologically active molecules of the invention pharmacodynamics of other biologically active molecules, for example, lipids and polymers such as polyamides, polyamides, polyethylene glycol and other polyethers.

The term "phospholipid" as used herein, refers to a hydrophobic molecule

comprising at least one phosphorus group. For example, a phospholipid can comprise a

phosphorus-containing group and saturated or unsaturated alkyl group, optionally
substituted with OH, COOH, oxo, amine, or substituted or unsubstituted aryl groups.

Therapeutic nucleic acid molecules (e.g., siNA molecules) delivered exogenously optimally are stable within cells until reverse transcription of the RNA has been modulated long enough to reduce the levels of the RNA transcript. The nucleic acid molecules are resistant to nucleases in order to function as effective intracellular therapeutic agents. Improvements in the chemical synthesis of nucleic acid molecules described in the instant invention and in the art have expanded the ability to modify nucleic acid molecules by introducing nucleotide modifications to enhance their nuclease stability as described above.

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In yet another embodiment, siNA molecules having chemical modifications that maintain or enhance enzymatic activity of proteins involved in RNAi are provided. Such nucleic acids are also generally more resistant to nucleases than unmodified nucleic acids. Thus, in vitro and/or in vivo the activity should not be significantly lowered.

Use of the nucleic acid-based molecules of the invention will lead to better treatments by affording the possibility of combination therapies (e.g., multiple siNA molecules targeted to different genes; nucleic acid molecules coupled with known small molecule modulators; or intermittent treatment with combinations of molecules, including different motifs and/or other chemical or biological molecules). The treatment of subjects with siNA molecules can also include combinations of different types of

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nucleic acid molecules, such as enzymatic nucleic acid molecules (ribozymes), allozymes, antisense, 2,5-A oligoadenylate, decoys, and aptamers.

In another aspect a siNA molecule of the invention comprises one or more 5' and/or a 3'- cap structure, for example, on only the sense siNA strand, the antisense siNA strand, or both siNA strands.

By "cap structure" is meant chemical modifications, which have been incorporated at either terminus of the oligonucleotide (see, for example, Adamic et al., U.S. Pat. No. 5,998,203, incorporated by reference herein). These terminal modifications protect the nucleic acid molecule from exonuclease degradation, and may help in delivery and/or localization within a cell. The cap may be present at the 5'-terminus (5'-cap) or at the 3'terminal (3'-cap) or may be present on both termini. In non-limiting examples, the 5'-cap includes, but is not limited to, glyceryl, inverted deoxy abasic residue (moiety); 4',5'methylene nucleotide; 1-(beta-D-erythrofuranosyl) nucleotide, 4'-thio nucleotide; carbocyclic nucleotide; 1,5-anhydrohexitol nucleotide; L-nucleotides; alpha-nucleotides; modified base nucleotide; phosphorodithioate linkage; threo-pentofuranosyl nucleotide; acyclic 3',4'-seco nucleotide; acyclic 3,4-dihydroxybutyl nucleotide; acyclic 3,5dihydroxypentyl nucleotide, 3'-3'-inverted nucleotide moiety; 3'-3'-inverted abasic moiety; 3'-2'-inverted nucleotide moiety; 3'-2'-inverted abasic moiety; 1,4-butanediol phosphate; 3'-phosphoramidate; hexylphosphate; aminohexyl phosphate; 3'-phosphate; 3'-phosphorothioate: phosphorodithioate: or bridging or non-bridging methylphosphonate moiety. Non-limiting examples of cap moieties are shown in Figure 10.

Non-limiting examples of the 3'-cap include, but are not limited to, glyceryl, inverted deoxy abasic residue (moiety), 4', 5'-methylene nucleotide; 1-(beta-D-erythrofuranosyl) nucleotide; 4'-thio nucleotide, carbocyclic nucleotide; 5'-amino-alkyl phosphate; 1,3-diamino-2-propyl phosphate; 3-aminopropyl phosphate; 6-aminohexyl phosphate; 1,2-aminododecyl phosphate; hydroxypropyl phosphate; 1,5-anhydrohexitol nucleotide; L-nucleotide; alpha-nucleotide; modified base nucleotide; phosphorodithioate; threo-pentofuranosyl nucleotide; acyclic 3',4'-seco nucleotide; 3,4-dihydroxybuyl nucleotide; 3,5-dihydroxypentyl nucleotide; 5'-5'-inverted nucleotide moiety; 5'-5'-inverted abasic moiety; 5'-phosphoramidate; 5'-phosphorothioate; 1,4-

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butanediol phosphate; 5'-amino; bridging and/or non-bridging 5'-phosphoramidate, phosphorothioate and/or phosphorodithioate, bridging or non bridging methylphosphonate and 5'-mercapio moieties (for more details see Beaucage and Iyer, 1993, Tetrahedron 49, 1925; incorporated by reference herein).

By the term "non-nucleotide" is meant any group or compound which can be incorporated into a nucleic acid chain in the place of one or more nucleotide units, including either sugar and/or phosphate substitutions, and allows the remaining bases to exhibit their enzymatic activity. The group or compound is abasic in that it does not contain a commonly recognized nucleotide base, such as adenosine, guanine, cytosine, uracil or thymine and therefore lacks a base at the 1'-position.

An "alkyl" group refers to a saturated aliphatic hydrocarbon, including straightchain, branched-chain, and cyclic alkyl groups. Preferably, the alkyl group has 1 to 12 carbons. More preferably, it is a lower alkyl of from 1 to 7 carbons, more preferably 1 to 4 carbons. The alkyl group can be substituted or unsubstituted. When substituted the substituted group(s) is preferably, hydroxyl, cyano, alkoxy, =O, =S, NO2 or N(CH3)2, amino, or SH. The term also includes alkenyl groups that are unsaturated hydrocarbon groups containing at least one carbon-carbon double bond, including straight-chain, branched-chain, and cyclic groups. Preferably, the alkenyl group has 1 to 12 carbons. More preferably, it is a lower alkenyl of from 1 to 7 carbons, more preferably 1 to 4 carbons. The alkenyl group may be substituted or unsubstituted. When substituted the substituted group(s) is preferably, hydroxyl, cyano, alkoxy, =O, =S, NO2, halogen, N(CH3)2, amino, or SH. The term "alkyl" also includes alkynyl groups that have an unsaturated hydrocarbon group containing at least one carbon-carbon triple bond. including straight-chain, branched-chain, and cyclic groups. Preferably, the alkynyl group has 1 to 12 carbons. More preferably, it is a lower alkynyl of from 1 to 7 carbons, more preferably 1 to 4 carbons. The alkynyl group may be substituted or unsubstituted. When substituted the substituted group(s) is preferably, hydroxyl, cyano, alkoxy, =O, =S, NO2 or N(CH3)2, amino or SH.

Such alkyl groups can also include aryl, alkylaryl, carbocyclic aryl, heterocyclic aryl, amide and ester groups. An "aryl" group refers to an aromatic group that has at

least one ring having a conjugated pi electron system and includes carbocyclic aryl, heterocyclic aryl and biaryl groups, all of which may be optionally substituted. The preferred substituent(s) of aryl groups are halogen, trihalomethyl, hydroxyl, SH, OH, cyano, alkoxy, alkyl, alkenyl, alkynyl, and amino groups. An "alkylaryl" group refers to an alkyl group (as described above) covalently joined to an aryl group (as described above). Carbocyclic aryl groups are groups wherein the ring atoms on the aromatic ring are all carbon atoms. The carbon atoms are optionally substituted. Heterocyclic aryl groups are groups having from 1 to 3 heteroatoms as ring atoms in the aromatic ring and the remainder of the ring atoms are carbon atoms. Suitable heteroatoms include oxygen, sulfur, and nitrogen, and include furanyl, thienyl, pyrridyl, pyrrolyl, N-lower alkyl pyrrolo, pyrimidyl, pyrazinyl, imidazolyl and the like, all optionally substituted. An "amide" refers to an -C(O)-NH-R, where R is either alkyl, aryl, alkylaryl or hydrogen.

By "nucleotide" as used herein is as recognized in the art to include natural bases (standard), and modified bases well known in the art. Such bases are generally located at the 1' position of a nucleotide sugar moiety. Nucleotides generally comprise a base, sugar and a phosphate group. The nucleotides can be unmodified or modified at the sugar, phosphate and/or base moiety, (also referred to interchangeably as nucleotide analogs, modified nucleotides, non-natural nucleotides, non-standard nucleotides and other; see, for example, Usman and McSwiggen, supra; Eckstein et al., International PCT Publication No. WO 92/07065; Usman et al., International PCT Publication No. WO 93/15187; Uhlman & Peyman, supra, all are hereby incorporated by reference herein). There are several examples of modified nucleic acid bases known in the art as summarized by Limbach et al., 1994, Nucleic Acids Res. 22, 2183. Some of the nonlimiting examples of base modifications that can be introduced into nucleic acid molecules include, inosine, purine, pyridin-4-one, pyridin-2-one, phenyl, pseudouracil, 2, 4, 6-trimethoxy benzene, 3-methyl uracil, dihydrou ridine, naphthyl, aminophenyl, 5-alkylcytidines (e.g., 5-methylcytidine), 5-alkyluridines (e.g., ribothymidine), 5-halouridine (e.g., 5-bromouridine) or 6-azapyrimidines or 6-alkylpyrimidines (e.g. 6methyluridine), propyne, and others (Burgin et al., 1996, Biochemistry, 35, 14090; Uhlman & Peyman, supra). By "modified bases" in this aspect is meant nucleotide bases other than adenine, guanine, cytosine and uracil at 1' position or their equivalents.

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In one embodiment, the invention features modified siNA molecules, with phosphate backbone modifications comprising one or more phosphorothioate, phosphorodithioate, methylphosphonate, phosphotriester, morpholino, amidate carbamate, carboxymethyl, acetamidate, polyamide, sulfonante, sulfonamide, sulfonamide, sulfonancetal, thioformacetal, and/or alkylsilyl, substitutions. For a review of oligonucleotide backbone modifications, see Hunziker and Leumann, 1995, Nucleic Acid Analogues: Synthesis and Properties, in Modern Synthetic Methods, VCH, 331-417, and Mesmaeker et al., 1994, Novel Backbone Replacements for Oligonucleotides, in Carbohydrate Modifications in Antisense Research, ACS, 24-39.

By "abasic" is meant sugar moieties lacking a base or having other chemical groups in place of a base at the 1' position, see for example Adamic *et al.*, U.S. Pat. No. 5.998.203.

By "unmodified nucleoside" is meant one of the bases adenine, cytosine, guanine, thymine, or uracil joined to the 1' carbon of  $\beta$ -D-ribo-furanose.

By "modified nucleoside" is meant any nucleotide base which contains a modification in the chemical structure of an unmodified nucleotide base, sugar and/or phosphate. Non-limiting examples of modified nucleotides are shown by Formulae I-VII and/or other modifications described herein.

In connection with 2'-modified nucleotides as described for the present invention, by "amino" is meant 2'-NH<sub>2</sub> or 2'-O- NH<sub>2</sub>, which can be modified or unmodified. Such modified groups are described, for example, in Eckstein et al., U.S. Pat. No. 5,672,695 and Matulic-Adamic et al., U.S. Pat. No. 6,248,878, which are both incorporated by reference in their entireties.

Various modifications to nucleic acid siNA structure can be made to enhance the utility of these molecules. Such modifications will enhance shelf-life, half-life in vitro, stability, and ease of introduction of such oligonucleotides to the target site, e.g., to enhance penetration of cellular membranes, and confer the ability to recognize and bind to targeted cells.

# Administration of Nucleic Acid Molecules

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A siNA molecule of the invention can be adapted for use to prevent or treat diseases, traits, disorders, and/or conditions described herein or otherwise known in the art to be related to gene expression, and/or any other trait, disease, disorder or condition that is related to or will respond to the levels of a target polynucleotide in a cell or tissue, alone or in combination with other therapies. For example, a siNA molecule can comprise a delivery vehicle, including liposomes, for administration to a subject, carriers and diluents and their salts, and/or can be present in pharmaceutically acceptable formulations. Methods for the delivery of nucleic acid molecules are described in Akhtar et al., 1992, Trends Cell Bio., 2, 139; Delivery Strategies for Antisense 10 Oligonucleotide Therapeutics, ed. Akhtar, 1995, Maurer et al., 1999, Mol. Membr. Biol., 16, 129-140; Hofland and Huang, 1999, Handb. Exp. Pharmacol., 137, 165-192; and Lee et al., 2000, ACS Symp. Ser., 752, 184-192, all of which are incorporated herein by reference. Beigelman et al., U.S. Pat. No. 6,395,713 and Sullivan et al., PCT WO 94/02595 further describe the general methods for delivery of nucleic acid molecules. These protocols can be utilized for the delivery of virtually any nucleic acid molecule. Nucleic acid molecules can be administered to cells by a variety of methods known to those of skill in the art, including, but not restricted to, encapsulation in liposomes, by iontophoresis, or by incorporation into other vehicles, such as biodegradable polymers, hydrogels, cyclodextrins (see for example Gonzalez et al., 1999, Bioconjugate Chem., 10, 1068-1074; Wang et al., International PCT publication Nos. WO 03/47518 and WO 03/46185), poly(lactic-co-glycolic)acid (PLGA) and PLCA microspheres (see for example US Patent 6,447,796 and US Patent Application Publication No. US 2002130430), biodegradable nanocapsules, and bioadhesive microspheres, or by proteinaceous vectors (O'Hare and Normand, International PCT Publication No. WO 25 00/53722). Alternatively, the nucleic acid/vehicle combination is locally delivered by direct injection or by use of an infusion pump. Direct injection of the nucleic acid molecules of the invention, whether subcutaneous, intramuscular, or intradermal, can take place using standard needle and syringe methodologies, or by needle-free technologies such as those described in Conry et al., 1999, Clin. Cancer Res., 5, 2330-2337 and Barry et al., International PCT Publication No. WO 99/31262. The molecules

30 of the instant invention can be used as pharmaceutical agents. Pharmaceutical agents

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prevent, modulate the occurrence, or treat (alleviate a symptom to some extent, preferably all of the symptoms) of a disease state in a subject.

In another embodiment, the nucleic acid molecules of the invention can also be formulated or complexed with polyethyleneimine and derivatives thereof, such as polyethyleneimine-polyethyleneiglycol-N-acetylgalactosamine (PEI-PEG-GAL) or polyethyleneimine-polyethyleneiglycol-tri-N-acetylgalactosamine (PEI-PEG-triGAL) derivatives. In one embodiment, the nucleic acid molecules of the invention are formulated as described in United States Patent Application Publication No. 20030077829, incorporated by reference herein in its entirety.

In one embodiment, a siNA molecule of the invention is complexed with membrane disruptive agents such as those described in U.S. Patent Application Publication No. 20010007666, incorporated by reference herein in its entirety including the drawings. In another embodiment, the membrane disruptive agent or agents and the siNA molecule are also complexed with a cationic lipid or helper lipid molecule, such as those lipids described in U.S. Patent No. 6,235,310, incorporated by reference herein in its entirety including the drawings.

In one embodiment, a siNA molecule of the invention is complexed with delivery systems as described in U.S. Patent Application Publication No. 2003077829 and International PCT Publication Nos. WO 00/03683 and WO O2/087541, all incorporated by reference herein in their entirety including the drawings.

In one embodiment, the nucleic acid molecules of the invention are administered via pulmonary delivery, such as by inhalation of an aerosol or spray dried formulation administered by an inhalation device or nebulizer, providing rapid local uptake of the nucleic acid molecules into relevant pulmonary tissues. Solid particulate compositions containing respirable dry particles of micronized nucleic acid compositions can be prepared by grinding dried or lyophilized nucleic acid compositions, and then passing the micronized composition through, for example, a 400 mesh screen to break up or separate out large agglomerates. A solid particulate composition comprising the nucleic acid compositions of the invention can optionally contain a dispersant which serves to facilitate the formation of an aerosol as well as other therapeutic compounds. A suitable

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dispersant is lactose, which can be blended with the nucleic acid compound in any suitable ratio, such as a 1 to 1 ratio by weight.

Aerosols of liquid particles comprising a nucleic acid composition of the invention

can be produced by any suitable means, such as with a nebulizer (see for example US 4,501,729). Nebulizers are commercially available devices which transform solutions or suspensions of an active ingredient into a therapeutic aerosol mist either by means of acceleration of a compressed gas, typically air or oxygen, through a narrow venturi orifice or by means of ultrasonic agitation. Suitable formulations for use in nebulizers comprise the active ingredient in a liquid carrier in an amount of up to 40% w/w preferably less than 20% w/w of the formulation. The carrier is typically water or a dilute aqueous alcoholic solution, preferably made isotonic with body fluids by the addition of, for example, sodium chloride or other suitable salts. Optional additives include preservatives if the formulation is not prepared sterile, for example, methyl hydroxybenzoate, anti-oxidants, flavorings, volatile oils, buffering agents and emulsifiers and other formulation surfactants. The aerosols of solid particles comprising the active composition and surfactant can likewise be produced with any solid particulate aerosol generator. Aerosol generators for administering solid particulate therapeutics to a subject produce particles which are respirable, as explained above, and generate a volume of aerosol containing a predetermined metered dose of a therapeutic composition at a rate suitable for human administration. One illustrative type of solid particulate aerosol generator is an insufflator. Suitable formulations for administration by insufflation include finely comminuted powders which can be delivered by means of an insufflator. In the insufflator, the powder, e.g., a metered dose thereof effective to carry out the treatments described herein, is contained in capsules or cartridges, typically made of gelatin or plastic, which are either pierced or opened in situ and the powder delivered by air drawn through the device upon inhalation or by means of a manually-operated pump. The powder employed in the insufflator consists either solely of the active ingredient or of a powder blend comprising the active ingredient, a suitable powder diluent, such as lactose, and an optional surfactant. The active ingredient typically comprises from 0.1 to 100 w/w of the formulation. A second type of illustrative aerosol generator comprises a metered dose inhaler. Metered dose inhalers are pressurized aerosol dispensers, typically containing a suspension or solution formulation of the active ingredient in a liquified

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propellant. During use these devices discharge the formulation through a valve adapted to deliver a metered volume to produce a fine particle spray containing the active ingredient. Suitable propellants include certain chlorofluorocarbon compounds, for example, dichlorodfluoromethane, trichlorofluoromethane, dichlorotetrafluoroethane and mixtures thereof. The formulation can additionally contain one or more co-solvents, for example, ethanol, emulsifiers and other formulation surfactants, such as oleic acid or sorbitan trioleate, anti-oxidants and suitable flavoring agents. Other methods for pulmonary delivery are described in, for example US Patent Application No. 20040037780, and US Patent Nos. 6.592,904: 6.582,728: 6.565.885.

In one embodiment, the invention features the use of methods to deliver the nucleic acid molecules of the instant invention to the central nervous system and/or peripheral nervous system. Experiments have demonstrated the efficient in vivo uptake of nucleic acids by neurons. As an example of local administration of nucleic acids to nerve cells, Sommer et al., 1998, Antisense Nuc. Acid Drug Dev., 8, 75, describe a study in which a 15mer phosphorothioate antisense nucleic acid molecule to c-fos is administered to rats via microinjection into the brain. Antisense molecules labeled with tetramethylrhodamine-isothiocyanate (TRITC) or fluorescein isothiocyanate (FITC) were taken up by exclusively by neurons thirty minutes post-injection. A diffuse cytoplasmic staining and nuclear staining was observed in these cells. As an example of systemic administration of nucleic acid to nerve cells, Epa et al., 2000, Antisense Nuc. Acid Drug Dev., 10, 469, describe an in vivo mouse study in which beta-cyclodextrin-adamantaneoligonucleotide conjugates were used to target the p75 neurotrophin receptor in neuronally differentiated PC12 cells. Following a two week course of IP acliministration, pronounced uptake of p75 neurotrophin receptor antisense was observed in dorsal root ganglion (DRG) cells. In addition, a marked and consistent down-regulation of p75 was observed in DRG neurons. Additional approaches to the targeting of nucleic acid to neurons are described in Broaddus et al., 1998, J. Neurosurg., 88(4), 734; Karle et al., 1997, Eur. J. Pharmocol., 340(2/3), 153; Bannai et al., 1998, Brain Research, 784(1,2), 304; Rajakumar et al., 1997, Synapse, 26(3), 199; Wu-pong et al., 1999, BioPharm, 12(1), 32; Bannai et al., 1998, Brain Res. Protoc., 3(1), 83; Simantov et al., 1996, Neuroscience, 74(1), 39. Nucleic acid molecules of the invention are therefore amenable to delivery to and uptake by cells that express repeat expansion allelic variants for

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modulation of RE gene expression. The delivery of nucleic acid molecules of the invention, targeting RE is provided by a variety of different strategies. Traditional approaches to CNS delivery that can be used include, but are not limited to, intrathecal and intracerebroventricular administration, implantation of catheters and pumps, direct injection or perfusion at the site of injury or lesion, injection into the brain arterial system, or by chemical or osmotic opening of the blood-brain barrier. Other approaches can include the use of various transport and carrier systems, for example though the use of conjugates and biodegradable polymers. Furthermore, gene therapy approaches, for example as described in Kaplitt et al., US 6,180,613 and Davidson, WO 04/013280, can be used to express nucleic acid molecules in the CNS.

In one embodiment, nucleic acid molecules of the invention are administered to the central nervous system (CNS) or peripheral nervous system (PNS). Experiments have demonstrated the efficient in vivo uptake of nucleic acids by neurons. As an example of local administration of nucleic acids to nerve cells, Sommer et al., 1998, Antisense Nuc. Acid Drug Dev., 8, 75, describe a study in which a 15mer phosphorothioate antisense nucleic acid molecule to c-fos is administered to rats via microinjection into the brain. Antisense molecules labeled with tetramethylrhodamine-isothiocyanate (TRITC) or fluorescein isothiocyanate (FITC) were taken up by exclusively by neurons thirty minutes post-injection. A diffuse cytoplasmic staining and nuclear staining was observed in these cells. As an example of systemic administration of nucleic acid to nerve cells, Epa et al., 2000, Antisense Nuc. Acid Drug Dev., 10, 469, describe an in vivo mouse study in which beta-cyclodextrin-adamantane-oligonucleoticle conjugates were used to target the p75 neurotrophin receptor in neuronally differentiated PC12 cells. Following a two week course of IP administration, pronounced uptake of p75 neurotrophin receptor antisense was observed in dorsal root ganglion (DRG) cells. In addition, a marked and consistent down-regulation of p75 was observed in DRG neurons. Additional approaches to the targeting of nucleic acid to neurons are described in Broaddus et al., 1998, J. Neurosurg., 88(4), 734; Karle et al., 1997, Eur. J. Pharmocol., 340(2/3), 153; Bannai et al., 1998, Brain Research, 784(1,2), 304; Rajakumar et al., 1997, Synapse, 26(3), 199; Wu-pong et al., 1999, BioPharm, 12(1), 32; 30 Bannai et al., 1998, Brain Res. Protoc., 3(1), 83; Simantov et al., 1996, Neuroscience,

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74(1), 39. Nucleic acid molecules of the invention are therefore amenable to delivery to and uptake by cells in the CNS and/or PNS.

The delivery of nucleic acid molecules of the invention to the CNS is provided by a variety of different strategies. Traditional approaches to CNS delivery that can be used include, but are not limited to, intrathecal and intracerebroventricular administration, implantation of catheters and pumps, direct injection or perfusion at the site of injury or lesion, injection into the brain arterial system, or by chemical or osmotic opening of the blood-brain barrier. Other approaches can include the use of various transport and carrier systems, for example though the use of conjugates and biodegradable polymers. Furthermore, gene therapy approaches, for example as described in Kaplitt et al., US 6,180,613 and Davidson, WO 04/013280, can be used to express nucleic acid molecules in the CNS.

In one embodiment, delivery systems of the invention include, for example, aqueous and nonaqueous gels, creams, multiple emulsions, microemulsions, liposomes, ointments, aqueous and nonaqueous solutions, lotions, acrosols, hydrocarbon bases and powders, and can contain excipients such as solubilizers, permeation enhancers (e.g., fatty acids, fatty acid esters, fatty alcohols and amino acids), and hydrophilic polymers (e.g., polycarbophil and polyvinylpyrolidone). In one embodiment, the pharmaceutically acceptable carrier is a liposome or a transdermal enhancer. Examples of liposomes which can be used in this invention include the following: (1) CellFectin, 1:1.5 (M/M) liposome formulation of the cationic lipid N,NI,NII,NIII-tetrapalmit-y-spermine and diolecyl phosphatidylethanolamine (DOPE) (GIBCO BRL); (2) Cytofectin GSV, 2:1 (M/M) liposome formulation of a cationic lipid and DOPE (Glen Research); (3) DOTAP (N-[1-(2,3-diolecyloxy)-N,N,N-tri-methyl-ammoniummethylsulfate) (Bochringer Manheim); and (4) Lipofectamine, 3:1 (M/M) liposome formulation of the polycationic lipid DOSPA and the neutral lipid DOPE (GIBCO BRL).

In one embodiment, delivery systems of the invention include patches, tablets, suppositories, pessaries, gels and creams, and can contain excipients such as solubilizers and enhancers (e.g., propylene glycol, bile salts and amino acids), and other vehicles (e.g., polyethylene glycol, fatty acid esters and derivatives, and hydrophilic polymers such as hydroxypropylmethylcellulose and hydroxypropylmethylcellulose and hydroxypropylmethylcellulose.

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In one embodiment, siNA molecules of the invention are formulated or complexed with polyethylenimine (e.g., linear or branched PEI) and/or polyethylenimine derivatives, including for example grafted PEIs such as galactose PEI, cholestero1 PEI, antibody derivatized PEI, and polyethylene glycol PEI (PEG-PEI) derivatives thereof (see for example Ogris et al., 2001, AAPA PharmSci, 3, 1-11; Furgeson et al., 2003, Bioconjugate Chem., 14, 840-847; Kunath et al., 2002, Phramaceutical Research, 19, 810-817; Choi et al., 2001, Bull. Korean Chem. Soc., 22, 46-52; Bettinger et al., 1999, Bioconjugate Chem., 10, 558-561; Peterson et al., 2002, Bioconjugate Chem., 13, 845-854; Erbacher et al., 1999, Journal of Gene Medicine Preprint, 1, 1-18; Godbey et al., 1999, PNAS USA, 96, 5177-5181; Godbey et al., 1999, Journal of Controlled Re-lease, 60, 149-160; Diebold et al., 1999, Journal of Biological Chemistry, 274, 19087-19094; Thomas and Klibanov, 2002, PNAS USA, 99, 14640-14645; and Sagara, US 6,586,524, incorporated by reference herein.

In one embodiment, a siNA molecule of the invention comprises a bioconjugate, for example a nucleic acid conjugate as described in Vargeese et al., USSN 10/427,160, filed April 30, 2003; US 6,528,631; US 6,335,434; US 6, 235,886; US 6,153,737; US 5,214,136; US 5,138,045, all incorporated by reference herein.

Thus, the invention features a pharmaceutical composition comprising one or more nucleic acid(s) of the invention in an acceptable carrier, such as a stabilizer, buffer, and the like. The polynucleotides of the invention can be administered (e.g., RNA, DNA or protein) and introduced to a subject by any standard means, with or without stabilizers, buffers, and the like, to form a pharmaceutical composition. When it is desired to use a liposome delivery mechanism, standard protocols for formation of liposomes can be followed. The compositions of the present invention can also be formulated and used as creams, gels, sprays, oils and other suitable compositions for topical, derrnal, or transdermal administration as is known in the art.

The present invention also includes pharmaceutically acceptable formulations of the compounds described. These formulations include salts of the above compounds, e.g., acid addition salts, for example, salts of hydrochloric, hydrobromic, acetic acid, and benzene sulfonic acid.

A pharmacological composition or formulation refers to a composition or formulation in a form suitable for administration, e.g., systemic or local administration, into a cell or subject, including for example a human. Suitable forms, in part, depend upon the use or the route of entry, for example oral, transdermal, or by injection. Such forms should not prevent the composition or formulation from reaching a target cell (i.e., a cell to which the negatively charged nucleic acid is desirable for delivery). For example, pharmacological compositions injected into the blood stream should be soluble. Other factors are known in the art, and include considerations such as toxicity and forms that prevent the composition or formulation from exerting its effect.

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In one embodiment, siNA molecules of the invention are administered to a subject by systemic administration in a pharmaceutically acceptable composition or formulation. By "systemic administration" is meant in vivo systemic absorption or accumulation of drugs in the blood stream followed by distribution throughout the entire body. Administration routes that lead to systemic absorption include, without limitation: intravenous, subcutaneous, intraperitoneal, inhalation, oral, intrapulmonary and intramuscular. Each of these administration routes exposes the siNA molecules of the invention to an accessible diseased tissue. The rate of entry of a drug into the circulation has been shown to be a function of molecular weight or size. The use of a liposome or other drug carrier comprising the compounds of the instant invention can potentially localize the drug, for example, in certain tissue types, such as the tissues of the reticular endothelial system (RES). A liposome formulation that can facilitate the association of drug with the surface of cells, such as, lymphocytes and macrophages is also useful. This approach can provide enhanced delivery of the drug to target cells by taking advantage of the specificity of macrophage and lymphocyte immune recognition of abnormal cells, such as cancer cells.

By "pharmaceutically acceptable formulation" or "pharmaceutically acceptable composition" is meant, a composition or formulation that allows for the effective distribution of the nucleic acid molecules of the instant invention in the physical location most suitable for their desired activity. Non-limiting examples of agents suitable for formulation with the nucleic acid molecules of the instant invention include: P-glycoprotein inhibitors (such as Pluronic P85), biodegradable polymers, such as poly

(DL-lactide-coglycolide) microspheres for sustained release delivery (Emerich, DF et a.1, 1999, Cell Transplant, 8, 47-58); and loaded nanoparticles, such as those made of polybutylcyanoacrylate. Other non-limiting examples of delivery strategies for the nucleic acid molecules of the instant invention include material described in Boado et al., 1998, J. Pharm. Sci., 87, 1308-1315; Tyler et al., 1999, FEBS Lett., 421, 280-284; Pardridge et al., 1995, PNAS USA., 92, 5592-5596; Boado, 1995, Adv. Drug Delivery Rev., 15, 73-107; Aldrian-Herrada et al., 1998, Nucleic Acids Res., 26, 4910-4916; and Tyler et al., 1999, PNAS USA., 96, 7053-7058.

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The invention also features the use of the composition comprising surfacemodified liposomes containing poly (ethylene glycol) lipids (PEG-modified, or longcirculating liposomes or stealth liposomes). These formulations offer a method for increasing the accumulation of drugs in target tissues. This class of drug carriers resists opsonization and elimination by the mononuclear phagocytic system (MPS or RES), thereby enabling longer blood circulation times and enhanced tissue exposure for the encapsulated drug (Lasic et al. Chem. Rev. 1995, 95, 2601-2627; Ishiwata et al., Chemz. Pharm. Bull. 1995, 43, 1005-1011). Such liposomes have been shown to accumulate selectively in tumors, presumably by extravasation and capture in the neovascularized target tissues (Lasic et al., Science 1995, 267, 1275-1276; Oku et al., 1995, Biochim. Biophys. Acta, 1238, 86-90). The long-circulating liposomes enhance the pharmacokinetics and pharmacodynamics of DNA and RNA, particularly compared to conventional cationic liposomes which are known to accumulate in tissues of the MPS (Liu et al., J. Biol. Chem. 1995, 42, 24864-24870; Choi et al., International PCT Publication No. WO 96/10391; Ansell et al., International PCT Publication No. WO 96/10390; Holland et al., International PCT Publication No. WO 96/10392). Longcirculating liposomes are also likely to protect drugs from nuclease degradation to a greater extent compared to cationic liposomes, based on their ability to avoid accumulation in metabolically aggressive MPS tissues such as the liver and spleen.

The present invention also includes compositions prepared for storage or administration that include a pharmaceutically effective amount of the desired compounds in a pharmaceutically acceptable carrier or diluent. Acceptable carriers or diluents for therapeutic use are well known in the pharmaceutical art, and are described,

for example, in Remington's Pharmaceutical Sciences, Mack Publishing Co. (A.R. Gennaro edit. 1985), hereby incorporated by reference herein. For example, preservatives, stabilizers, dyes and flavoring agents can be provided. These include sodium benzoate, sorbic acid and esters of p-hydroxybenzoic acid. In addition, antioxidants and suspending agents can be used.

A pharmaceutically effective dose is that dose required to prevent, inhibit the occurrence, or treat (alleviate a symptom to some extent, preferably all of the symptoms) of a disease state. The pharmaceutically effective dose depends on the type of disease, the composition used, the route of administration, the type of mammal being treated, the physical characteristics of the specific mammal under consideration, concurrent medication, and other factors that those skilled in the medical arts will recognize. Generally, an amount between 0.1 mg/kg and 100 mg/kg body weight/day of active ingredients is administered dependent upon potency of the negatively charged polymer.

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The nucleic acid molecules of the invention and formulations thereof can be administered orally, topically, parenterally, by inhalation or spray, or rectally in dosage unit formulations containing conventional non-toxic pharmaceutically acceptable carriers, adjuvants and/or vehicles. The term parenteral as used herein includes percutaneous, subcutaneous, intravascular (e.g., intravenous), intramuscular, or intrathecal injection or infusion techniques and the like. In addition, there is provided a pharmaceutical formulation comprising a nucleic acid molecule of the invention and a pharmaceutically acceptable carrier. One or more nucleic acid molecules of the invention can be present in association with one or more non-toxic pharmaceutically acceptable carriers and/or diluents and/or adjuvants, and if desired other active ingredients. The pharmaceutical compositions containing nucleic acid molecules of the invention can be in a form suitable for oral use, for example, as tablets, troches, lozenges, aqueous or oily suspensions, dispersible powders or granules, emulsion, hard or soft capsules, or syrups or clixirs.

Compositions intended for oral use can be prepared according to any method known to the art for the manufacture of pharmaccutical compositions and such compositions can contain one or more such sweetening agents, flavoring agents, coloring agents or preservative agents in order to provide pharmaccutically elegant and palatable

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preparations. Tablets contain the active ingredient in admixture with non-toxic pharmaceutically acceptable excipients that are suitable for the manufacture of tablets. These excipients can be, for example, inert diluents; such as calcium carbonate, sodium carbonate, lactose, calcium phosphate or sodium phosphate; granulating and disintegrating agents, for example, com starch, or alginic acid; binding agents, for example starch, gelatin or acacia; and lubricating agents, for example magnesium stearate, stearic acid or tale. The tablets can be uncoated or they can be coated by known techniques. In some cases such coatings can be prepared by known techniques to delay disintegration and absorption in the gastrointestinal tract and thereby provide a sustained action over a longer period. For example, a time delay material such as glyceryl monosterate or glyceryl distearate can be employed.

Formulations for oral use can also be presented as hard gelatin capsules wherein the active ingredient is mixed with an inert solid diluent, for example, calcium carbonate, calcium phosphate or kaolin, or as soft gelatin capsules wherein the active ingredient is mixed with water or an oil medium, for example peanut oil, liquid paraffin or olive oil.

Aqueous suspensions contain the active materials in a mixture with excipients suitable for the manufacture of aqueous suspensions. Such excipients are suspending agents, for example sodium carboxymethylcellulose, methylcellulose, hydropropyl-methylcellulose, sodium alginate, polyvinylpyrrolidone, gum tragacanth and gum acacia; dispersing or wetting agents can be a naturally-occurring phosphatide, for example, lecithin, or condensation products of an alkylene oxide with fatty acids, for example polyoxyethylene stearate, or condensation products of ethylene oxide with long chain aliphatic alcohols, for example heptadecaethyleneoxycetanol, or condensation products of ethylene oxide with partial esters derived from fatty acids and a hexitol such as polyoxyethylene sorbitol monooleate, or condensation products of ethylene oxide with partial esters derived from fatty acids and hexitol anhydrides, for example polyethylene sorbitan monooleate. The aqueous suspensions can also contain one or more preservatives, for example ethyl, or n-propyl p-hydroxybenzoate, one or more coloring agents, one or more flavoring agents, and one or more sweetening agents, such as success or saccharin.

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Oily suspensions can be formulated by suspending the active ingredients in a vegetable oil, for example arachis oil, olive oil, sesame oil or coconut oil, or in a mineral oil such as liquid paraffin. The oily suspensions can contain a thickening agent, for example beeswax, hard paraffin or cetyl alcohol. Sweetening agents and flavoring agents can be added to provide palatable oral preparations. These compositions can be preserved by the addition of an anti-oxidant such as ascorbic acid

Dispersible powders and granules suitable for preparation of an aqueous suspension by the addition of water provide the active ingredient in admixture with a dispersing or wetting agent, suspending agent and one or more preservatives. Suitable dispersing or wetting agents or suspending agents are exemplified by those already mentioned above. Additional excipients, for example sweetening, flavoring and coloring agents, can also be present.

Pharmaceutical compositions of the invention can also be in the form of oil-inwater emulsions. The oily phase can be a vegetable oil or a mineral oil or mixtures of these. Suitable emulsifying agents can be naturally-occurring gums, for example gum acacia or gum tragacanth, naturally-occurring phosphatides, for example soy bean, lecithin, and esters or partial esters derived from fatty acids and hexitol, anhydrides, for example sorbitan monooleate, and condensation products of the said partial esters with ethylene oxide, for example polyoxyethylene sorbitan monooleate. The emulsions can also contain sweetening and flavoring agents.

Syrups and elixirs can be formulated with sweetening agents, for example glycerol, propylene glycol, sorbitol, glucose or sucrose. Such formulations can also contain a demulcent, a preservative and flavoring and coloring agents. The pharmaceutical compositions can be in the form of a sterile injectable aqueous or oleaginous suspension. This suspension can be formulated according to the known art using those suitable dispersing or wetting agents and suspending agents that have been mentioned above. The sterile injectable preparation can also be a sterile injectable solution or suspension in a non-toxic parentally acceptable diluent or solvent, for example as a solution in 1,3-butanediol. Among the acceptable vehicles and solvents that can be employed are water, Ringer's solution and isotonic sodium chloride solution. In addition, sterile, fixed oils are conventionally employed as a solvent or suspending medium. For this purpose, any

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bland fixed oil can be employed including synthetic mono-or diglycerides. In addition, fatty acids such as oleic acid find use in the preparation of injectables.

The nucleic acid molecules of the invention can also be administered in the form of suppositories, e.g., for rectal administration of the drug. These compositions can be prepared by mixing the drug with a suitable non-irritating excipient that is solid at ordinary temperatures but liquid at the rectal temperature and will therefore melt in the rectum to release the drug. Such materials include cocoa butter and polyethylene glycols.

Nucleic acid molecules of the invention can be administered parenterally in a sterile medium. The drug, depending on the vehicle and concentration used, can either be suspended or dissolved in the vehicle. Advantageously, adjuvants such as local anesthetics, preservatives and buffering agents can be dissolved in the vehicle.

Dosage levels of the order of from about 0.1 mg to about 140 mg per kilogram of body weight per day are useful in the treatment of the above-indicated conditions (about 0.5 mg to about 7 g per subject per day). The amount of active ingredient that can be combined with the carrier materials to produce a single dosage form varies depending upon the host treated and the particular mode of administration. Dosage unit forms generally contain between from about 1 mg to about 500 mg of an active ingredient.

It is understood that the specific dose level for any particular subject depends upon a variety of factors including the activity of the specific compound employed, the age, body weight, general health, sex, diet, time of administration, route of administration, and rate of excretion, drug combination and the severity of the particular disease undergoing therapy.

For administration to non-human animals, the composition can also be added to the animal feed or drinking water. It can be convenient to formulate the animal feed and drinking water compositions so that the animal takes in a therapeutically appropriate quantity of the composition along with its diet. It can also be convenient to present the composition as a premix for addition to the feed or drinking water.

The nucleic acid molecules of the present invention can also be administered to a subject in combination with other therapeutic compounds to increase the overall therapeutic effect. The use of multiple compounds to treat an indication can increase the beneficial effects while reducing the presence of side effects.

In one embodiment, the invention comprises compositions suitable for 5 administering nucleic acid molecules of the invention to specific cell types. For example, the asialoglycoprotein receptor (ASGPr) (Wu and Wu, 1987, J. Biol. Chem. 262, 4429-4432) is unique to hepatocytes and binds branched galactose-terminal glycoproteins, such as asialoorosomucoid (ASOR). In another example, the folate receptor is overexpressed in many cancer cells. Binding of such glycoproteins, synthetic glycoconjugates, or folates to the receptor takes place with an affinity that strongly depends on the degree of branching of the oligosaccharide chain, for example, triatennary structures are bound with greater affinity than biatenarry or monoatennary chains (Baenziger and Fiete, 1980, Cell, 22, 611-620; Connolly et al., 1982, J. Biol. Chem., 257, 939-945). Lee and Lee, 1987, Glycoconjugate J., 4, 317-328, obtained this high specificity through the use of N-acetyl-D-galactosamine as the carbohydrate moiety, which has higher affinity for the receptor, compared to galactose. This "clustering effect" has also been described for the binding and uptake of mannosyl-terminating glycoproteins or glycoconjugates (Ponpipom et al., 1981, J. Med. Chem., 24, 1388-1395). The use of galactose, galactosamine, or folate based conjugates to transport exogenous compounds across cell membranes can provide a targeted delivery approach to, for example, the treatment of liver disease, cancers of the liver, or other cancers. The use of bioconjugates can also provide a reduction in the required dose of therapeutic compounds required for treatment. Furthermore, therapeutic bioavailability, pharmacodynamics, and pharmacokinetic parameters can be modulated through the use 25 of nucleic acid bioconjugates of the invention. Non-limiting examples of such bioconjugates are described in Vargeese et al., USSN 10/201,394, filed August 13, 2001; and Matulic-Adamic et al., USSN 60/362,016, filed March 6, 2002.

Alternatively, certain siNA molecules of the instant invention can be expressed within cells from eukaryotic promoters (e.g., Izant and Weintraub, 1985, Science, 229, 345; McGarry and Lindquist, 1986, Proc. Natl. Acad. Sci., USA 83, 399; Scanlon et al.,

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1991, Proc. Natl. Acad. Sci. USA, 88, 10591-5; Kashani-Sabet et al., 1992, Antisense Res. Dev., 2, 3-15; Dropulic et al., 1992, J. Virol., 66, 1432-41; Weerasinghe et al., 1991, J. Virol., 65, 5531-4; Ojwang et al., 1992, Proc. Natl. Acad. Sci. USA, 89, 10802- Chen et al., 1992, Nucleic Acids Res., 20, 4581-9; Sarver et al., 1990 Science, 247, 5 1222-1225; Thompson et al., 1995, Nucleic Acids Res., 23, 2259; Good et al., 1997, Gene Therapy, 4, 45. Those skilled in the art realize that any nucleic acid can be expressed in eukaryotic cells from the appropriate DNA/RNA vector. The activity of such nucleic acids can be augmented by their release from the primary transcript by a enzymatic nucleic acid (Draper et al., PCT WO 93/23569, and Sullivan et al., PCT WO 94/02595: Ohkawa et al., 1992, Nucleic Acids Symp, Ser., 27, 15-6; Taira et al., 1991, Nucleic Acids Res., 19, 5125-30; Ventura et al., 1993, Nucleic Acids Res., 21, 3249-55; Chowrira et al., 1994, J. Biol. Chem., 269, 25856.

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In another aspect of the invention, RNA molecules of the present invention can be expressed from transcription units (see for example Couture et al., 1996, TIG., 12, 510) inserted into DNA or RNA vectors. The recombinant vectors can be DNA plasmids or viral vectors. siNA expressing viral vectors can be constructed based on, but not limited to, adeno-associated virus, retrovirus, adenovirus, or alphavirus. In another embodiment, pol III based constructs are used to express nucleic acid molecules of the invention (see for example Thompson, U.S. Pats. Nos. 5,902,880 and 6,146,886). The recombinant vectors capable of expressing the siNA molecules can be delivered as described above, and persist in target cells. Alternatively, viral vectors can be used that provide for transient expression of nucleic acid molecules. Such vectors can be repeatedly administered as necessary. Once expressed, the siNA molecule interacts with the target mRNA and generates an RNAi response. Delivery of siNA molecule expressing vectors can be systemic, such as by intravenous or intra-muscular administration, by administration to target cells ex-planted from a subject followed by reintroduction into the subject, or by any other means that would allow for introduction into the desired target cell (for a review see Couture et al., 1996, TIG., 12, 510).

In one aspect the invention features an expression vector comprising a nucleic acid sequence encoding at least one siNA molecule of the instant invention. The expression vector can encode one or both strands of a siNA duplex, or a single self-complementary

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strand that self hybridizes into a siNA duplex. The nucleic acid sequences encoding the siNA molecules of the instant invention can be operably linked in a manner that allows expression of the siNA molecule (see for example Paul et al., 2002, Nature Biotechnology, 19, 505; Miyagishi and Taira, 2002, Nature Biotechnology, 19, 497; Lee et al., 2002, Nature Biotechnology, 19, 500; and Novina et al., 2002, Nature Medicine, advance online publication doi:10.1038/nm725).

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In another aspect, the invention features an expression vector comprising: a) a transcription initiation region (e.g., eukaryotic pol I, II or III initiation region); b) a transcription termination region (e.g., eukaryotic pol I, II or III termination region); and c) a nucleic acid sequence encoding at least one of the siNA molecules of the instant invention, wherein said sequence is operably linked to said initiation region and said termination region in a manner that allows expression and/or delivery of the siNA molecule. The vector can optionally include an open reading frame (ORF) for a protein operably linked on the 5° side or the 3°-side of the sequence encoding the siNA of the invention; and/or an intron (intervening sequences).

Transcription of the siNA molecule sequences can be driven from a promoter for eukaryotic RNA polymerase I (pol I), RNA polymerase II (pol II), or RNA polymerase III (pol III). Transcripts from pol II or pol III promoters are expressed at high levels in all cells: the levels of a given pol II promoter in a given cell type depends on the nature of the gene regulatory sequences (enhancers, silencers, etc.) present nearby. Prokaryotic RNA polymerase promoters are also used, providing that the prokaryotic RNA polymerase enzyme is expressed in the appropriate cells (Elroy-Stein and Moss, 1990, Proc. Natl. Acad. Sci. U S A, 87, 6743-7; Gao and Huang 1993, Nucleic Acids Res., 21, 2867-72; Lieber et al., 1993, Methods Enzymol., 217, 47-66; Zhou et al., 1990, Mol. Cell, Biol., 10, 4529-37). Several investigators have demonstrated that nucleic acid molecules expressed from such promoters can function in mammalian cells (e.g. Kashani-Sabet et al., 1992, Antisense Res. Dev., 2, 3-15; Ojwang et al., 1992, Proc. Natl. Acad. Sci. U S A, 89, 10802-6; Chen et al., 1992, Nucleic Acids Res., 20, 4581-9; Yu et al., 1993, Proc. Natl. Acad. Sci. USA, 90, 6340-4; L'Huillier et al., 1992, EMBO J., 11, 4411-8; Lisziewicz et al., 1993, Proc. Natl. Acad. Sci. U. S. A, 90, 8000-4; Thompson et al., 1995, Nucleic Acids Res., 23, 2259; Sullenger & Cech, 1993, Science,

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262, 1566). More specifically, transcription units such as the ones derived from genes encoding U6 small nuclear (snRNA), transfer RNA (tRNA) and adenovirus VA RNA are useful in generating high concentrations of desired RNA molecules such as siNA in cells (Thompson et al., supra; Couture and Stinchcomb, 1996, supra; Noonberg et al., 1994, Nucleic Acid Res., 22, 2830; Noonberg et al., U.S. Pat. No. 5,624,803; Good et al., 1997, Gene Ther., 4, 45; Beigelman et al., International PCT Publication No. WO 96/18736. The above siNA transcription units can be incorporated into a variety of vectors for introduction into mammalian cells, including but not restricted to, plasmid DNA vector, viral DNA vectors (such as adenovirus or adeno-associated virus vectors), or viral RNA vectors (such as retroviral or alphavirus vectors) (for a review see Couture and Stinchcomb, 1996, supra).

In another aspect the invention features an expression vector comprising a nucleic acid sequence encoding at least one of the siNA molecules of the invention in a manner that allows expression of that siNA molecule. The expression vector comprises in one embodiment; a) a transcription initiation region; b) a transcription termination region; and c) a nucleic acid sequence encoding at least one strand of the siNA molecule, wherein the sequence is operably linked to the initiation region and the termination region in a manner that allows expression and/or delivery of the siNA molecule.

In another embodiment the expression vector comprises: a) a transcription initiation region; b) a transcription termination region; c) an open reading frame; and d) a nucleic acid sequence encoding at least one strand of a siNA molecule, wherein the sequence is operably linked to the 3'-end of the open reading frame and wherein the sequence is operably linked to the initiation region, the open reading frame and the termination region in a manner that allows expression and/or delivery of the siNA molecule. In yet another embodiment, the expression vector comprises: a) a transcription initiation region; b) a transcription termination region; c) an intron; and d) a nucleic acid sequence encoding at least one siNA molecule, wherein the sequence is operably linked to the initiation region, the intron and the termination region in a manner which allows expression and/or delivery of the nucleic acid molecule.

In another embodiment, the expression vector comprises: a) a transcription initiation region; b) a transcription termination region; c) an intron; d) an open reading

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frame; and e) a nucleic acid sequence encoding at least one strand of a siNA molecule, wherein the sequence is operably linked to the 3'-end of the open reading frame and wherein the sequence is operably linked to the initiation region, the intron, the open reading frame and the termination region in a manner which allows expression and/or delivery of the siNA molecule.

## Expressed pseudogene target biology and biochemistry

Pseudogenes have been considered as nonfunctional sequences of genomic DNA originally derived from functional genes. The assumption follows that all pseudogene mutations are selectively neutral and have equal probability to become fixed in the population. However, pseudogenes that have been suitably investigated often exhibit functional roles, such as gene expression, gene regulation, generation of genetic (e.g., antibody, antigenic, and other) diversity (see for example Balakirev et al., 2003, Annu. Rev. Genet., 37, 123-51). A pseudogene is an evolutionary conserved gene copy that does not produce a functional, full-length protein. The human genome is estimated to contain upwards of 20,000 pseudogenes. Although much effort has been devoted to understanding the function of such pseudogenes, their biological roles remain largely unknown. Some psuedogenes that are expressed have been associated with disease or developmental conditions. For example, Hirotsune et al., 2003, Nature, 423, 91-96, report the role of an expressed pseudogene, specifically regulation of messenger-RNA stability, in a transgene-insertion mouse mutant exhibiting polycystic kidneys and bone deformity. The transgene was integrated into the vicinity of the expressing pseudogene of Makorin1, referred to as Makorin1-p1. This insertion attenuated transcription of Makorin1-p1, resulting in destabilization of Makorin1 mRNA in trans by way of a cisacting RNA decay element within the 5' region of Makorin1 that is homologous between Makorin1 and Makorin1-p1. Either Makorin1 or Makorin1-p1 transgenes could rescue the expressed pseudogene phenotypes. These findings demonstrate a specific regulatory role of an expressed pseudogene, and point to the functional significance of non-coding RNAs (Hirotsune et al., 2003, Nature, 423, 91-96). In a subsequent study, it was determined that 2-3% of human processed pseudogenes are expressed (Yano et al., 2004, J. Mol. Med., 82(7), 414-22). Other reports of expressed pseudogenes are described in. for example Kandouz et al., 2004, Oncogene, 23, 4763-70 (Connexin43); Yoshida et al.,

2003, Hum Cell, 16, 65-72 (Makorin1); and Perez Jurado et al., 1998, Hum Mol Genet, 7, 325-34).

#### Examples:

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The following are non-limiting examples showing the selection, isolation, synthesis and activity of nucleic acids of the instant invention.

# Example 1: Tandem synthesis of siNA constructs

Exemplary siNA molecules of the invention are synthesized in tandem using a cleavable linker, for example, a succinyl-based linker. Tandem synthesis as described herein is followed by a one-step purification process that provides RNAi molecules in high yield. This approach is highly amenable to siNA synthesis in support of high throughput RNAi screening, and can be readily adapted to multi-column or multi-well synthesis platforms.

After completing a tandem synthesis of a siNA oligo and its complement in which the 5'-terminal dimethoxytrityl (5'-O-DMT) group remains intact (trityl on synthesis), the oligonucleotides are deprotected as described above. Following deprotection, the siNA sequence strands are allowed to spontaneously hybridize. This hybridization yields a duplex in which one strand has retained the 5'-O-DMT group while the complementary strand comprises a terminal 5'-hydroxyl. The newly formed duplex behaves as a single molecule during routine solid-phase extraction purification (Trityl-On purification) even though only one molecule has a dimethoxytrityl group. Because the strands form a stable duplex, this dimethoxytrityl group (or an equivalent group, such as other trityl groups or other hydrophobic moieties) is all that is required to purify the pair of oligos, for example, by using a C18 cartridge.

Standard phosphoramidite synthesis chemistry is used up to the point of introducing a tandem linker, such as an inverted deoxy abasic succinate or glyceryl succinate linker (see Figure 1) or an equivalent cleavable linker. A non-limiting example of linker coupling conditions that can be used includes a hindered base such as diisopropylethylamine (DIPA) and/or DMAP in the presence of an activator reagent such as Bromotripyrrolidinophosphoniumhexaflurorophosphate (PvBrOP). After the linker is

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coupled, standard synthesis chemistry is utilized to complete synthesis of the second sequence leaving the terminal the 5'-O-DMT intact. Following synthesis, the resulting oligonucleotide is deprotected according to the procedures described herein and quenched with a suitable buffer, for example with 50mM NaOAc or 1.5M NH4H2CO<sub>3</sub>.

Purification of the siNA duplex can be readily accomplished using solid phase extraction, for example, using a Waters C18 SepPak 1g cartridge conditioned with 1 column volume (CV) of acetonitrile, 2 CV H2O, and 2 CV 50mM NaOAc. The sample is loaded and then washed with 1 CV H2O or 50mM NaOAc. Failure sequences are eluted with 1 CV 14% ACN (Aqueous with 50mM NaOAc and 50mM NaCI). The column is then washed, for example with 1 CV H2O followed by on-column detritylation, for example by passing 1 CV of 1% aqueous trifluoroacetic acid (IFA) over the column, then adding a second CV of 1% aqueous TFA to the column and allowing to stand for approximately 10 minutes. The remaining TFA solution is removed and the column washed with H2O followed by 1 CV 1M NaCl and additional H2O. The siNA duplex product is then eluted, for example, using 1 CV 20% aqueous CAN.

Figure 2 provides an example of MALDI-TOF mass spectrometry analysis of a purified siNA construct in which each peak corresponds to the calculated mass of an individual siNA strand of the siNA duplex. The same purified siNA provides three peaks when analyzed by capillary gel electrophoresis (CGE), one peak presumably corresponding to the duplex siNA, and two peaks presumably corresponding to the separate siNA sequence strands. Ion exchange HPLC analysis of the same siNA contract only shows a single peak. Testing of the purified siNA construct using a luciferase reporter assay described below demonstrated the same RNAi activity compared to siNA constructs generated from separately synthesized oligonucleotide sequence strands.

# Example 2: Identification of potential siNA target sites in any RNA sequence

The sequence of an RNA target of interest, such as a viral or human mRNA transcript, is screened for target sites, for example by using a computer folding algorithm. In a non-limiting example, the sequence of a gene or RNA gene transcript derived from a database, such as Genbank, is used to generate siNA targets having

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complementarity to the target. Such sequences can be obtained from a database, or can be determined experimentally as known in the art. Target sites that are known, for example, those target sites determined to be effective target sites based on studies with other nucleic acid molecules, for example ribozymes or antisense, or those targets known to be associated with a disease or condition such as those sites containing mutations or deletions, can be used to design siNA molecules targeting those sites. Various parameters can be used to determine which sites are the most suitable target sites within the target RNA sequence. These parameters include but are not limited to secondary or tertiary RNA structure, the nucleotide base composition of the target sequence, the degree of homology between various regions of the target sequence, or the relative position of the target sequence within the RNA transcript. Based on these determinations, any number of target sites within the RNA transcript can be chosen to screen siNA molecules for efficacy, for example by using in vitro RNA cleavage assays, cell culture, or animal models. In a non-limiting example, anywhere from 1 to 1000 target sites are chosen within the transcript based on the size of the siNA construct to be used. High throughput screening assays can be developed for screening siNA molecules using methods known in the art, such as with multi-well or multi-plate assays to determine efficient reduction in target gene expression.

## Example 3: Selection of siNA molecule target sites in a RNA

The following non-limiting steps can be used to carry out the selection of siNAs targeting a given gene sequence or transcript.

- 1. The target sequence is parsed in silico into a list of all fragments or subsequences of a particular length, for example 23 nucleotide fragments, contained within the target sequence. This step is typically carried out using a custom Perl script, but commercial sequence analysis programs such as Oligo, MacVector, or the GCG Wisconsin Package can be employed as well.
- 2. In some instances the siNAs correspond to more than one target sequence; such would be the case for example in targeting different transcripts of the same gene, targeting different transcripts of more than one gene, or for targeting both the human gene and an animal homolog. In this case, a subsequence list of a particular length is

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generated for each of the targets, and then the lists are compared to find matching sequences in each list. The subsequences are then ranked according to the number of target sequences that contain the given subsequence; the goal is to find subsequences that are present in most or all of the target sequences. Alternately, the ranking can identify subsequences that are unique to a target sequence, such as a mutant target sequence. Such an approach would enable the use of siNA to target specifically the mutant sequence and not effect the expression of the normal sequence.

- 3. In some instances the siNA subsequences are absent in one or more sequences while present in the desired target sequence; such would be the case if the siNA targets a gene with a paralogous family member that is to remain untargeted. As in case 2 above, a subsequence list of a particular length is generated for each of the targets, and then the lists are compared to find sequences that are present in the target gene but are absent in the untargeted paralog.
- The ranked siNA subsequences can be further analyzed and ranked according to GC
   content. A preference can be given to sites containing 30-70% GC, with a further preference to sites containing 40-60% GC.
  - The ranked siNA subsequences can be further analyzed and ranked according to selffolding and internal hairpins. Weaker internal folds are preferred; strong hairpin structures are to be avoided.
- 20 6. The ranked siNA subsequences can be further analyzed and ranked according to whether they have runs of GGG or CCC in the sequence. GGG (or even more Gs) in either strand can make oligonucleotide synthesis problematic and can potentially interfere with RNAi activity, so it is avoided whenever better sequences are available. CCC is searched in the target strand because that will place GGG in the antisense strand.
  - 7. The ranked siNA subsequences can be further analyzed and ranked according to whether they have the dinucleotide UU (uridine dinucleotide) on the 3'-end of the sequence, and/or AA on the 5'-end of the sequence (to yield 3' UU on the antisense sequence). These sequences allow one to design siNA molecules with terminal TT thymidine dinucleotides.

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- 8. Four or five target sites are chosen from the ranked list of subsequences as described above. For example, in subsequences having 23 nucleotides, the right 21 nucleotides of each chosen 23-mer subsequence are then designed and synthesized for the upper (sense) strand of the siNA duplex, while the reverse complement of the left 21 nucleotides of each chosen 23-mer subsequence are then designed and synthesized for the lower (antisense) strand of the siNA duplex. If terminal TT residues are desired for the sequence (as described in paragraph 7), then the two 3' terminal nucleotides of both the sense and antisense strands are replaced by TT prior to synthesizing the oligos.
- The siNA molecules are screened in an in vitro, cell culture or animal model system
  to identify the most active siNA molecule or the most preferred target site within the
  target RNA sequence.
  - Other design considerations can be used when selecting target nucleic acid sequences, see, for example, Reynolds et al., 2004, Nature Biotechnology Advanced Online Publication, 1 February 2004, doi:10.1038/nbt936 and Ui-Tei et al., 2004, Nucleic Acids Research, 32, doi:10.1093/nar/gkh247.

In an alternate approach, a pool of siNA constructs specific to a target polynucloctide sequence is used to screen for target sites in cells expressing target RNA. The general strategy used in this approach is shown in Figure 9. Cells expressing target 20 RNA are transfected with the pool of siNA constructs and cells that demonstrate a phenotype associated with target inhibition are sorted. The pool of siNA constructs can be expressed from transcription cassettes inserted into appropriate vectors (see for example Figure 7 and Figure 8). The siNA from cells demonstrating a positive phenotypic change (e.g., decreased proliferation, decreased RNA levels, decreased protein expression), are sequenced to determine the most suitable target site(s) within the target RNA sequence.

#### Example 4: Targeted siNA design

siNA target sites were chosen by analyzing sequences of the target polynucleotide and optionally prioritizing the target sites on the basis of folding (structure of any given sequence analyzed to determine siNA accessibility to the target), by using a library of

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siNA molecules as described in Example 3, or alternately by using an *in vitro* siNA system as described in Example 6 herein. siNA molecules are designed that could bind each target and are optionally individually analyzed by computer folding to assess whether the siNA molecule can interact with the target sequence. Varying the length of the siNA molecules can be chosen to optimize activity. Generally, a sufficient number of complementary nucleotide bases are chosen to bind to, or otherwise interact with, the target RNA, but the degree of complementarity can be modulated to accommodate siNA duplexes or varying length or base composition. By using such methodologies, siNA molecules can be designed to target sites within any known RNA sequence, for example those RNA sequences corresponding to the any gene transcript.

Chemically modified siNA constructs are designed to provide nuclease stability for systemic administration in vivo and/or improved pharmacokinetic, localization, and delivery properties while preserving the ability to mediate RNAi activity. Chemical modifications as described herein are introduced synthetically using synthetic methods described herein and those generally known in the art. The synthetic siNA constructs are then assayed for nuclease stability in serum and/or cellular/tissue extracts (e.g. liver extracts). The synthetic siNA constructs are also tested in parallel for RNAi activity using an appropriate assay, such as a luciferase reporter assay as described herein or another suitable assay that can quantity RNAi activity. Synthetic siNA constructs that possess both nuclease stability and RNAi activity can be further modified and re-evaluated in stability and activity assays. The chemical modifications of the stabilized active siNA constructs can then be applied to any siNA sequence targeting any chosen RNA and used, for example, in target screening assays to pick lead siNA compounds for therapeutic development (see for example Figure 11).

## 25 Example 5: Chemical Synthesis and Purification of siNA

siNA molecules can be designed to interact with various sites in the RNA message, for example, target sequences within the RNA sequences described herein. The sequence of one strand of the siNA molecule(s) is complementary to the target site sequences described above. The siNA molecules can be chemically synthesized using methods described herein. Inactive siNA molecules that are used as control sequences can be synthesized by scrambling the sequence of the siNA molecules such that it is not

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complementary to the target sequence. Generally, siNA constructs can by synthesized using solid phase oligonucleotide synthesis methods as described herein (see for example Usman et al., US Patent Nos. 5,804,683; 5,831,071; 5,998,203; 6,117,657; 6,353,098; 6,362,323; 6,437,117; 6,469,158; Scaringe et al., US Patent Nos. 6,111,086; 6,008,400; 6,111,086 all incorporated by reference herein in their entirety).

In a non-limiting example, RNA oligonucleotides are synthesized in a stepwise fashion using the phosphoramidite chemistry as is known in the art. Standard phosphoramidite chemistry involves the use of nucleosides comprising any of 5'-O-dimethoxytrityl, 2'-O-tert-butyldimethylsilyl, 3'-O-2-Cyanoethyl N,N-diisopropylphosphoroamidite groups, and exocyclic amine protecting groups (e.g. N6-benzoyl adenosine, N4 acetyl cytidine, and N2-isobutyryl guanosine). Alternately, 2'-O-Silyl Ethers can be used in conjunction with acid-labile 2'-O-orthoester protecting groups in the synthesis of RNA as described by Scaringe supra. Differing 2' chemistries can require different protecting groups, for example 2'-deoxy-2'-amino nucleosides can utilize N-phthaloyl protection as described by Usman et al., US Patent 5,631,360, incorporated by reference herein in its entirety).

During solid phase synthesis, each nucleotide is added sequentially (3'- to 5'direction) to the solid support-bound oligonucleotide. The first nucleoside at the 3'-end
of the chain is covalently attached to a solid support (e.g., controlled pore glass or
polystyrene) using various linkers. The nucleotide precursor, a ribonucleoside
phosphoramidite, and activator are combined resulting in the coupling of the second
nucleoside phosphoramidite onto the 5'-end of the first nucleoside. The support is then
washed and any unreacted 5'-hydroxyl groups are capped with a capping reagent such as
acetic anhydride to yield inactive 5'-acetyl moieties. The trivalent phosphorus linkage is
then oxidized to a more stable phosphate linkage. At the end of the nucleotide addition
cycle, the 5'-O-protecting group is cleaved under suitable conditions (e.g., acidic
conditions for trityl-based groups and Fluoride for silyl-based groups). The cycle is
repeated for each subsequent nucleotide.

Modification of synthesis conditions can be used to optimize coupling efficiency, for example by using differing coupling times, differing reagent/phosphoramidite concentrations, differing contact times, differing solid supports and solid support linker

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chemistries depending on the particular chemical composition of the siNA to be synthesized. Deprotection and purification of the siNA can be performed as is generally described in Usman et al., US 5,831,071, US 6,353,098, US 6,437,117, and Bellon et al., US 6,054,576, US 6,162,909, US 6,303,773, or Scaringe supra, incorporated by reference herein in their entireties. Additionally, deprotection conditions can be modified to provide the best possible yield and purity of siNA constructs. For example, applicant has observed that oligonucleotides comprising 2'-deoxy-2'-fluoro nucleotides can degrade under inappropriate deprotection conditions. Such oligonucleotides are deprotected using aqueous methylamine at about 35°C for 30 minutes. If the 2'-deoxy-2'-fluoro containing oligonucleotide also comprises ribonucleotides, after deprotection with aqueous methylamine at about 35°C for 30 minutes, TEA-HF is added and the reaction maintained at about 65°C for an additional 15 minutes.

# Example 6: RNAi in vitro assay to assess siNA activity

An in vitro assay that recapitulates RNAi in a cell-free system is used to evaluate siNA constructs targeting target RNA. The assay comprises the system described by Tuschl et al., 1999, Genes and Development, 13, 3191-3197 and Zamore et al., 2000, Cell, 101, 25-33 adapted for use with target RNA. A Drosophila extract derived from syncytial blastoderm is used to reconstitute RNAi activity in vitro. Target RNA is generated via in vitro transcription from an appropriate target expressing plasmid using T7 RNA polymerase or via chemical synthesis as described herein. Sense and antisense siNA strands (for example 20 uM each) are annealed by incubation in buffer (such as 100 mM potassium acetate, 30 mM HEPES-KOH, pH 7.4, 2 mM magnesium acetate) for 1 minute at 90°C followed by 1 hour at 37°C, then diluted in lysis buffer (for example 100 mM potassium acetate, 30 mM HEPES-KOH at pH 7.4, 2mM magnesium acetate). Annealing can be monitored by gel electrophoresis on an agarose gel in TBE buffer and stained with ethidium bromide. The Drosophila lysate is prepared using zero to twohour-old embryos from Oregon R flies collected on yeasted molasses agar that are dechorionated and lysed. The lysate is centrifuged and the supernatant isolated. The assay comprises a reaction mixture containing 50% lysate [vol/vol], RNA (10-50 pM final concentration), and 10% [vol/vol] lysis buffer containing siNA (10 nM final

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creatine phosphokinase, 100 um GTP, 100 uM UTP, 100 uM CTP, 500 uM ATP, 5 mM DTT, 0.1 U/uL RNasin (Promega), and 100 uM of each amino acid. The final concentration of potassium acetate is adjusted to 100 mM. The reactions are preassembled on ice and preincubated at 25° C for 10 minutes before adding RNA, then incubated at 25° C for an additional 60 minutes. Reactions are quenched with 4 volumes of 1.25 x Passive Lysis Buffer (Promega). Target RNA cleavage is assayed by RT-PCR analysis or other methods known in the art and are compared to control reactions in which siNA is omitted from the reaction.

Alternately, internally-labeled target RNA for the assay is prepared by in vitro transcription in the presence of [alpha-32p] CTP, passed over a G50 Sephadex column by spin chromatography and used as target RNA without further purification. Optionally, target RNA is 5-32 P-end labeled using T4 polynucleotide kinase enzyme. Assays are performed as described above and target RNA and the specific RNA cleavage products generated by RNAi are visualized on an autoradiograph of a gel. The percentage of cleavage is determined by PHOSPHOR IMAGER. (autoradiography) quantitation of bands representing intact control RNA or RNA from control reactions without siNA and the cleavage products generated by the assay.

In one embodiment, this assay is used to determine target sites in the target RNA target for siNA mediated RNAi cleavage, wherein a plurality of siNA constructs are screened for RNAi mediated cleavage of the target RNA, for example, by analyzing the assay reaction by electrophoresis of labeled target RNA, or by northern blotting, as well as by other methodology well known in the art.

## Example 7: Nucleic acid inhibition of target RNA

siNA molecules targeted to the human target RNA are designed and synthesized as described above. These nucleic acid molecules can be tested for cleavage activity in vivo, for example, using the following procedure.

Two formats are used to test the efficacy of siNAs of the invention. First, the reagents are tested in cell culture to determine the extent of RNA and protein inhibition. siNA reagents are selected against the target as described herein. RNA inhibition is

measured after delivery of these reagents by a suitable transfection agent to cells. Relative amounts of target RNA are measured versus actin using real-time PCR monitoring of amplification (eg., ABI 7700 TAQMAN® (real-time PCR monitoring of amplification)). A comparison is made to a mixture of oligonucleotide sequences made to unrelated targets or to a randomized siNA control with the same overall length and chemistry, but randomly substituted at each position. Primary and secondary lead reagents are chosen for the target and optimization performed. After an optimal transfection agent concentration is chosen, a RNA time-course of inhibition is performed with the lead siNA molecule. In addition, a cell-plating format can be used to determine RNA inhibition.

## Delivery of siNA to Cells

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Cells (e.g., HEKn/HEKa, HeLa, A549, A375 cells) are seeded, for example, at 1x10<sup>5</sup> cells per well of a six-well dish in EGM-2 (BioWhittaker) the day before transfection. siNA (final concentration, for example 20nM) and cationic lipid (e.g., final concentration 2µg/ml) are complexed in EGM basal media (Bio Whittaker) at 37°C for 30 minutes in polystyrene tubes. Following vortexing, the complexed siNA is added to each well and incubated for the times indicated. For initial optimization experiments, cells are seeded, for example, at 1x10<sup>3</sup> in 96 well plates and siNA complex added as described. Efficiency of delivery of siNA to cells is determined using a fluorescent siNA complexed with lipid. Cells in 6-well dishes are incubated with siNA for 24 hours, tinsed with PBS and fixed in 2% paraformaldehyde for 15 minutes at room temperature. Uptake of siNA is visualized using a fluorescent microscope.

# TAQMAN® (real-time PCR monitoring of amplification) and Lightcycler quantification of mRNA

Total RNA is prepared from cells following siNA delivery, for example, using Qiagen RNA purification kits for 6-well or Rneasy extraction kits for 96-well assays. For TAQMAN® analysis (real-time PCR monitoring of amplification), dual-labeled probes are synthesized with the reporter dye, FAM or JOE, covalently linked at the 5'-end and the quencher dye TAMRA conjugated to the 3'-end. One-step RT-PCR amplifications are performed on, for example, an ABI PRISM 7700 Sequence Detector using 50 µl

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reactions consisting of 10 µl total RNA, 100 nM forward primer, 900 nM reverse primer, 100 nM probe, 1X TaqMan PCR reaction buffer (PE-Applied Biosystems), 5.5 mM MgCl<sub>2</sub>, 300 µM each dATP, dCTP, dGTP, and dTTP, 10U RNase Inhibitor (Prornega), 1.25U AMPLITAQ GOLD® (DNA polymerase) (PE-Applied Biosystems) and 10U M-5 MLV Reverse Transcriptase (Promega). The thermal cycling conditions can consist of 30 minutes at 48°C, 10 minutes at 95°C, followed by 40 cycles of 15 seconds at 95°C and 1 minute at 60°C. Quantitation of mRNA levels is determined relative to standards generated from serially diluted total cellular RNA (300, 100, 33, 11 ng/rxn) and normalizing to 8-actin or GAPDH mRNA in parallel TAQMAN® reactions (real-time PCR monitoring of amplification). For each gene of interest an upper and lower primer and a fluorescently labeled probe are designed. Real time incorporation of SYBR Green I dye into a specific PCR product can be measured in glass capillary tubes using a lightcyler. A standard curve is generated for each primer pair using control cRNA. Values are represented as relative expression to GAPDH in each sample.

## 15 Western blotting

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Nuclear extracts can be prepared using a standard micro preparation technique (see for example Andrews and Faller, 1991, Nucleic Acids Research, 19, 2499). Protein extracts from supermatants are prepared, for example using TCA precipitation. An equal volume of 20% TCA is added to the cell supermatant, incubated on ice for 1 hour and pelleted by centrifugation for 5 minutes. Pellets are washed in acetone, dried and resuspended in water. Cellular protein extracts are run on a 10% Bis-Tris Nu.Page (nuclear extracts) or 4-12% Tris-Glycine (supermatant extracts) polyacrylamide gel and transferred onto nitro-cellulose membranes. Non-specific binding can be blocked by incubation, for example, with 5% non-fat milk for 1 hour followed by primary anti-body for 16 hour at 4°C. Following washes, the secondary antibody is applied, for example (1:10,000 dilution) for 1 hour at room temperature and the signal detected with SuperSignal reagent (Pierce).

#### Example 8: Models useful to evaluate the down-regulation of gene expression

Evaluating the efficacy of siNA molecules of the invention in animal models is an important prerequisite to human clinical trials. Various animal models of carneer,

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proliferative, inflammatory, autoimmune, neurologic, ocular, respiratory, metabolic, etc. diseases, conditions, or disorders as are known in the art can be adapted for use for preclinical evaluation of the efficacy of nucleic acid compositions of the invetention in modulating target gene expression toward therapeutic, cosmetic, or research use.

# 5 Example 9: RNAi mediated inhibition of target gene expression

siNA constructs (are tested for efficacy in reducing target RNA expression in cells, (e.g., HEKn/HEKa, HeLa, A549, A375 cells). Cells are plated approximately 24 hours before transfection in 96-well plates at 5,000-7,500 cells/well, 100 µl/well, such that at the time of transfection cells are 70-90% confluent. For transfection, annealed siNAs are mixed with the transfection reagent (Lipofectamine 2000, Invitrogen) in a volume of 50 μl/well and incubated for 20 minutes at room temperature. The siNA transfection mixtures are added to cells to give a final siNA concentration of 25 nM in a volume of 150 µl. Each siNA transfection mixture is added to 3 wells for triplicate siNA treatments. Cells are incubated at 37° for 24 hours in the continued presence of the siNA transfection mixture. At 24 hours, RNA is prepared from each well of treated cells. The supernatants with the transfection mixtures are first removed and discarded, then the cells are lysed and RNA prepared from each well. Target gene expression following treatment is evaluated by RT-PCR for the target gene and for a control gene (36B4, an RNA polymerase subunit) for normalization. The triplicate data is averaged and the standard deviations determined for each treatment. Normalized data are graphed and the percent reduction of target mRNA by active siNAs in comparison to their respective inverted control si NAs is determined.

#### Example 10: Indications

Particular conditions and disease states that can be associated with gene expression modulation include, but are not limited to proliferative, inflammatory, autoimmune, neurologic, ocular, respiratory, metabolic etc. diseases, conditions, or disorders as described herein or otherwise known in the art, and any other diseases, conditions or disorders that are related to or will respond to the levels of a target (e.g., target protein or target nolymucleotide) in a cell or tissue, alone or in combination with other therapies.

Those skilled in the art will recognize that other drugs such as anti-cancer compounds and therapies can be similarly be readily combined with the nucleic acid molecules of the instant invention (e.g. ribozymes and antisense molecules) and are hence within the scope of the instant invention. Such compounds and therapies are well known in the art. For combination therapy, the nucleic acids of the invention are prepared in one of two ways. First, the agents are physically combined in a preparation of nucleic acid and chemotherapeutic agent, such as a mixture of a nucleic acid of the invention encapsulated in liposomes and ifosfamide in a solution for intravenous administration, wherein both agents are present in a therapeutically effective concentration (e.g., ifosfamide in solution to deliver 1000-1250 mg/m2/day and liposome-associated nucleic acid of the invention in the same solution to deliver 0.1-100 mg/kg/day). Alternatively, the agents are administered separately but simultaneously in their respective effective doses (e.g., 1000-1250 mg/m2/d ifosfamide and 0.1 to 100 mg/kg/day nucleic acid of the invention).

#### Example 11: Diagnostic uses 15

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The siNA molecules of the invention can be used in a variety of diagnostic applications, such as in the identification of molecular targets (e.g., RNA) in a variety of applications, for example, in clinical, industrial, environmental, agricultural and/or research settings. Such diagnostic use of siNA molecules involves utilizing reconstituted 20 RNAi systems, for example, using cellular lysates or partially purified cellular lysates. siNA molecules of this invention can be used as diagnostic tools to examine genetic drift and mutations within diseased cells or to detect the presence of endogenous or exogenous, for example viral, RNA in a cell. The close relationship between siNA activity and the structure of the target RNA allows the detection of mutations in any region of the molecule, which alters the base-pairing and three-dimensional structure of the target RNA. By using multiple siNA molecules described in this invention, one can map nucleotide changes, which are important to RNA structure and function in vitro, as well as in cells and tissues. Cleavage of target RNAs with siNA molecules can be used to inhibit gene expression and define the role of specified gene products in the progression of disease or infection. In this manner, other genetic targets can be defined as important mediators of the disease. These experiments will lead to better treatment of

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the disease progression by affording the possibility of combination therapies (e.g., multiple siNA molecules targeted to different genes, siNA molecules coupled with known small molecule inhibitors, or intermittent treatment with combinations siNA molecules and/or other chemical or biological molecules). Other in vitro uses of siNA molecules of this invention are well known in the art, and include detection of the presence of mRNAs associated with a disease, infection, or related condition. Such RNA is detected by determining the presence of a cleavage product after treatment with a siNA using standard methodologies, for example, fluorescence resonance emission transfer (FRET).

In a specific example, siNA molecules that cleave only wild-type or mutant forms of the target RNA are used for the assay. The first siNA molecules (i.e., those that cleave only wild-type forms of target RNA) are used to identify wild-type RNA present in the sample and the second siNA molecules (i.e., those that cleave only mutant forms of target RNA) are used to identify mutant RNA in the sample. As reaction controls, synthetic substrates of both wild-type and mutant RNA are cleaved by both siNA molecules to demonstrate the relative siNA efficiencies in the reactions and the absence of cleavage of the "non-targeted" RNA species. The cleavage products from the synthetic substrates also serve to generate size markers for the analysis of wild-type and mutant RNAs in the sample population. Thus, each analysis requires two siNA molecules, two substrates and one unknown sample, which is combined into six reactions. The presence of cleavage products is determined using an RNase protection assay so that full-length and cleavage fragments of each RNA can be analyzed in one lane of a polyacrylamide gel. It is not absolutely required to quantify the results to gain insight into the expression of mutant RNAs and putative risk of the desired phenotypic changes in target cells. The expression of mRNA whose protein product is implicated in the development of the phenotype (i.e., disease related or infection related) is adequate to establish risk. If probes of comparable specific activity are used for both transcripts, then a qualitative comparison of RNA levels is adequate and decreases the cost of the initial diagnosis. Higher mutant form to wild-type ratios are correlated with higher risk whether RNA levels are compared qualitatively or quantitatively.

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All patents and publications mentioned in the specification are indicative of the levels of skill of those skilled in the art to which the invention pertains. All references cited in this disclosure are incorporated by reference to the same extent as if each reference had been incorporated by reference in its entirety individually.

One skilled in the art would readily appreciate that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The methods and compositions described herein as presently representative of preferred embodiments are exemplary and are not intended as limitations on the scope of the invention. Changes therein and other uses will occur to those skilled in the art, which are encompassed within the spirit of the invention, are defined by the scope of the claims.

It will be readily apparent to one skilled in the art that varying substitutions and modifications can be made to the invention disclosed herein without departing from the scope and spirit of the invention. Thus, such additional embodiments are within the scope of the present invention and the following claims. The present invention teaches one skilled in the art to test various combinations and/or substitutions of chemical modifications described herein toward generating nucleic acid constructs with improved activity for mediating RNAi activity. Such improved activity can comprise improved stability, improved bioavailability, and/or improved activation of cellular responses mediating RNAi. Therefore, the specific embodiments described herein are not limiting and one skilled in the art can readily appreciate that specific combinations of the modifications described herein can be tested without undue experimentation toward identifying siNA molecules with improved RNAi activity.

The invention illustratively described herein suitably can be practiced in the absence of any element or elements, limitation or limitations that are not specifically disclosed herein. Thus, for example, in each instance herein any of the terms "comprising", "consisting essentially of", and "consisting of" may be replaced with either of the other two terms. The terms and expressions which have been employed are used as terms of description and not of limitation, and there is no intention that in the use of such terms and expressions of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible

within the scope of the invention claimed. Thus, it should be understood that although the present invention has been specifically disclosed by preferred embodiments, optional features, modification and variation of the concepts herein disclosed may be resorted to by those skilled in the art, and that such modifications and variations are considered to be within the scope of this invention as defined by the description and the appended claims.

In addition, where features or aspects of the invention are described in terms of Markush groups or other grouping of alternatives, those skilled in the art will recognize that the invention is also thereby described in terms of any individual member or subgroup of members of the Markush group or other group.

NM 000536 Homo sapiens recombination activating gene 2 (RAG2), mRNA NM 000601 Homo sapiens hepatocyte growth factor (hepapoietin A; scatter factor) (HGF) NM 000940 Homo sapiens paraoxonase 3 (PON3), mRNA NM 000941 Homo sapiens P450 (cytochrome) oxidoreductase (POR), mRNA NM\_000953 Homo sapiens prostaglandin D2 receptor (DP) (PTGDR), mRNA NM\_0010011: Homo sapiens intersectin 1 (SH3 domain protein) (ITSN1), transcript variant NM 0010011/ Homo sapiens transient receptor potential cation channel, subfamily M, mem NM\_0010012: Homo sapiens solute carrier family 2 (facilitated glucose transporter), membe NM 0010013 Homo sapiens trypsin X3 (TRY1), mRNA NM 0010013: Homo sapiens ATPase, Ca++ transporting, plasma membrane 1 (ATP2B1), 1 NM 0010013. Homo sapiens similar to ubiquitin-specific protease 17-like protein (LOC4014 NM 0010013. Homo sapiens Kazal type senne protease inhibitor 5-like 2 (SPINK5L2), mRN NM 0010013 Homo sapiens protein kinase C substrate 80K-H (PRKCSH), transcript variar NM\_0010013 Homo saplens chromosome 10 open reading frame 74 (C10orf74), mRNA NM\_0010013 Homo sapiens ATPase, Ca++ transporting, plasma membrane 2 (ATP2B2), t NM 0010013 Homo saplens cytochrome b5 reductase b5R.2 (CYB5R2), transcript variant NM 0010013 Homo sapiens biogenesis of lysosome-related organelles complex-1, subuni NM\_0010013 Homo saplens MGC27121 gene (MGC27121), mRNA NM\_0010013 Homo sapiens ATPase, Ca++ transporting, plasma membrane 3 (ATP2B3), 1 NM 0010013 Homo sapiens claudin 20 (CLDN20), mRNA NM\_0010013 Homo sapiens NFKB inhibitor interacting Ras-like 2 (NKIRAS2), transcript va NM 0010013i Homo sapiens CD44 antigen (homing function and Indian blood group syster NM 0010013! Homo sapiens CD44 antigen (homing function and Indian blood group syster NM 0010013! Homo sapiens CD44 antigen (homing function and Indian blood group syster NM\_0010013l Homo saplens CD44 antigen (homing function and Indian blood group syster NM 0010013! Homo saplens HCG3 gene (HCG3), mRNA NM 0010013! Homo sapiens LIM domain only 3 (rhombotin-like 2) (LMO3), transcript variar NM 0010013! Homo sapiens ATPase, Ca++ transporting, plasma membrane 4 (ATP2B4), t NM 0010014 Homo saplens hypothetical protein MGC24381 (MGC24381), mRNA NM 0010014 Homo sapiens similar to Zinc finger protein 208 (LOC163223), mRNA NM 0010014 Homo saplens family with sequence similarity 26, member C (FAM26C), mRI NM 0010014 Homo sapiens similar to F-box only protein 2 (LOC342897), mRNA NM\_0010014 Homo sapiens zinc finger protein 429 (ZNF429), mRNA NM\_0010014 Homo sapiens similar to TBC1 domain family, member 3, centromeric (LOC4 NM\_0010014 Homo sapiens similar to TBC1 domain family, member 3, telomeric (MGC445 NM\_0010014 Homo sapiens SMAD, mothers against DPP homolog 5 (Drosophila) (SMAD! NM 0010014; Homo sapiens SMAD, mothers against DPP homolog 5 (Drosophila) (SMAD! NM\_0010014: Homo sapiens troponin T2, cardiac (TNNT2), transcript variant 2, mRNA NM 0010014: Homo sapiens troponin T2, cardiac (TNNT2), transcript variant 3, mRNA NM\_0010014: Homo sapiens troponin T2, cardiac (TNNT2), transcript variant 4, mRNA NM 0010014; Homo sapiens syntaxin 16 (STX16), transcript variant 1, mRNA NM\_0010014 Homo sapiens syntaxin 16 (STX16), transcript variant 3, mRNA NM 0010014: Homo sapiens chemokine (C-C motif) ligand 4-like (CCL4L), mRNA NM\_0010014: Homo sapiens similar to RIKEN cDNA 4921524J17 (LOC388272), mRNA NM\_0010014: Homo sapiens chemokine (C-C motif) ligand 3-like, centromeric (MGC12815 NM\_0010014: Homo sapiens lanosterol synthase (2,3-oxidosqualene-lanosterol cyclase) (L NM\_0010014 Homo sapiens solute carrier family 35, member E4 (SLC35E4), mRNA NM\_0010014i Homo sapiens hypothetical protein FLJ11011 (FLJ11011), transcript variant NM\_0010014/ Homo sapiens hypothetical protein FLJ11011 (FLJ11011), transcript variant ( NM\_0010014l Homo sapiens zinc finger, DHHC domain containing 13 (ZDHHC13), transcri NM\_0010014i Homo sapiens phosphotriesterase related (PTER), transcript variant 1, mRN<sub>v</sub>

NM\_0010014H Ihomo sapiens ATPase, Ca++ transporting, byee 2C, member 1 (ATP2C1), tir NM\_0010014H Ihomo sapiens ATPase, Ca++ transporting, byee 2C, member 1 (ATP2C1), tir NM\_0010014H Ihomo sapiens ATPase, Ca++ transporting, byee 2C, member 1 (ATP2C1), tir NM\_0010015H Ihomo sapiens synuclein, beta (SNCB), transcript variant 1, mRNM\_NM\_0010015H Ihomo sapiens synuclein, beta (SNCB), transcript variant 1, mRNM\_NM\_0010015H Ihomo sapiens NADH dehydrogenase (ubiquinone) flavoprotein 3, 10NCD (NN\_0010015H Ihomo sapiens hepatoma-derived growth factor-tested protein 2 (HDGF2), tr

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NM 0010015; Homo sapiens UDP-glucose pyrophosphorylase 2 (UGP2), transcript variant
NM 0010015; Homo sapiens transgelin (TAGLN), transcript variant 1, mRNA
NM 0010015; Homo sapiens RAR-related orphan receptor C (RORC), transcript variant 2, I
NM 0010015; Homo sapiens transmembrane 6 superfamily member 2 (TM6SF2), transcrip-
NM_0010015 Homo sapiens CD36 antigen (collagen type I receptor, thrombospondin recei
NM_0010015 Homo sapiens CD36 antigen (collagen type I receptor, thrombospondin recei
NM_0010015 Homo sapiens growth factor receptor-bound protein 10 (GRB10), transcript v
NM_0010015 Homo sapiens growth factor receptor-bound protein 10 (GRB10), transcript v
NM_0010015: Homo sapiens chromosome 9 open reading frame 103 (C9orf103), mRNA
NM 0010015! Homo sapiens LEM domain containing 1 (LEMD1), mRNA
NM_0010015! Homo sapiens germ and embryonic stem cell enriched protein STELLA (STE
NM 0010015 Homo sapiens growth factor receptor-bound protein 10 (GRB10), transcript v
NM 0010015 Homo sapiens galactokinase 2 (GALK2), transcript variant 2, mRNA
NM_0010015! Homo sapiens similar to growth differentiation factor 16 (LOC392255), mRNJ
NM_0010015i Homo sapiens golgi associated, gamma adaptin ear containing, ARF binding
NM_0010015l Homo sapiens golgi associated, gamma adaptin ear containing, ARF binding
NM_0010015(Homo sapiens translocase of inner mitochondrial membrane 50 homolog (ye
NM 0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 2, mRNA
NM 0010015l Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 3, mRNA
NM 0010015/Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 4, mRNA
NM 0010015 Homo saplens phosphodiesterase 9A (PDE9A), transcript variant 5, mRNA
NM 0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 6, mRNA
NM 0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 7, mRNA
NM 0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 8, mRNA
NM_0010015 Homo saplens phosphodiesterase 9A (PDE9A), transcript variant 9, mRNA
NM_0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 10, mRNA
NM_0010015 Homo saplens phosphodiesterase 9A (PDE9A), transcript variant 11, mRNA
NM_0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 12, mRNA
NM 0010015 Homo sapiens phosphodlesterase 9A (PDE9A), transcript variant 13, mRNA
NM 0010015 Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 14, mRNA
NIM 0010015(Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 15, mRNA
NM_0010015i Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 16, mRNA
NM_0010015i Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 17, mRNA
NM 0010015l Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 18, mRNA
NM_0010015i Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 19, mRNA
NM 0010015i Homo sapiens phosphodiesterase 9A (PDE9A), transcript variant 20, mRNA
NM_0010015i Homo sapiens ATPase, Na+/K+ transporting, alpha 1 polypeptide (ATP1A1),
NM 0010016 Homo sapiens mediator of RNA polymerase II transcription, subunit 8 homo le
NM_0010016 Homo sapiens mediator of RNA polymerase II transcription, subunit 8 homole
NM_0010016! Homo sapiens mediator of RNA polymerase II transcription, subunit 8 homo le
NM 0010016l Homo saplens similar to hypothetical protein 9530023G02 (MGC90512), mR
NM 0010016! Homo sapiens olfactory receptor, family 9, subfamily A, member 4 (OR9A4),
NM 0010016 Homo sapiens olfactory receptor, family 9, subfamily A, member 2 (OR9A2),
NM 0010016 Homo saplens olfactory receptor, family 2, subfamily A, member 14 (OR2A14
NM_0010016 Homo sapiens hypothetical protein LOC144363 (LOC144363), mRNA
NM_0010016l Homo sapiens hypothetical protein LOC155054 (LOC155054), mRNA
NM 0010016 Homo sapiens FLJ16636 protein (FLJ16636), mRNA
NM_0010016 Homo sapiens hypothetical LOC255349 (bA9F11.1), mRNA
NM_0010016i Homo sapiens hypothetical protein LOC339745 (LOC339745), mRNA
NM_0010016l Homo sapiens FLJ16008 protein (FLJ16008), mRNA
NM_0010016l Homo sapiens prostate cancer associated protein 5 (PCANAP5), transcript v
NM_0010016i Homo sapiens olfactory receptor, family 6, subfamily V, member 1 (OR6V1).
NM 0010016 Homo sapiens FLJ26175 protein (FLJ26175), mRNA
NM 0010016i Homo sapiens FLJ41603 protein (FLJ41603). mRNA
NM 0010016 Homo sapiens FLJ46321 protein (FLJ46321), mRNA
NM 0010016 Homo sapiens FLJ16518 protein (FLJ16518), mRNA
NM 0010016 Homo sapiens ribonuclease-like protein 9 (h461), mRNA
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NM 0010016 Homo sapiens FLJ46385 protein (FLJ46385), mRNA
NM 0010016 Homo sapiens lipocalin 9 (LCN9), mRNA
NM 0010016 Homo sapiens FLJ46300 protein (FLJ46300), mRNA
NM 0010016 Homo sapiens FLJ44653 protein (FLJ44653), mRNA
NM_0010016 Homo sapiens FLJ41423 protein (FLJ41423), mRNA
NM 0010016 Homo sapiens FLJ42102 protein (FLJ42102), mRNA
NM 0010016i Homo sapiens FLJ45300 protein (FLJ45300), mRNA
NM 0010016i Homo sapiens FLJ45530 protein (FLJ45530), mRNA
NM 0010016 Homo sapiens similar to HSPC296 (MGC88387), mRNA
NM 0010016i Homo sapiens FLJ45831 protein (FLJ45831), mRNA
NM 0010016i Homo sapiens FLJ45079 protein (FLJ45079), mRNA
NM 0010016 Homo sapiens FLJ43870 protein (FLJ43870), mRNA
NM 0010016 Homo sapiens FLJ26850 protein (FLJ26850), mRNA
NM 0010016 Homo sapiens FLJ35409 protein (FLJ35409), mRNA
NM 0010016 Homo sapiens FLJ44005 protein (FLJ44005), mRNA
NM_0010016! Homo sapiens hypothetical FLJ42133 (FLJ42133), mRNA
NM 0010016! Homo sapiens FLJ44790 protein (FLJ44790), mRNA
NM 0010016 Homo sapiens FLJ45139 protein (FLJ45139), mRNA
NM 0010016 Homo sapiens FLJ46257 protein (FLJ46257), mRNA
NM_0010016! Homo sapiens FLJ41993 protein (FLJ41993). mRNA
NM 0010016: Homo sapiens FLJ42418 protein (FLJ42418), mRNA
NM 0010016: Homo sapiens FLJ44006 protein (FLJ44006), mRNA
NM 0010016 Homo sapiens FLJ41821 protein (FLJ41821), mRNA
NM 0010016! Homo sapiens FLJ43879 protein (FLJ43879), mRNA
NM 0010016! Homo sapiens FLJ25996 protein (FLJ25996), mRNA
NM 0010017 Homo sapiens FLJ45966 protein (FLJ45966), mRNA
NM_0010017/ Homo sapiens HCV F-transactivated protein 1 (LOC401152), mRNA
NM 0010017 Homo sapiens FLJ33360 protein (FLJ33360), mRNA
NM 0010017 Homo saplens FLJ46010 protein (FLJ46010), mRNA
NM 0010017 Homo saplens FLJ44796 protein (FLJ44796), mRNA
NM_0010017i Homo sapiens FLJ41649 protein (FLJ41649), mRNA
NM_0010017(Homo sapiens FLJ42177 protein (FLJ42177). mRNA
NM 0010017(Homo sapiens FLJ45974 protein (FLJ45974), mRNA
NM 0010017 Homo saplens FLJ45537 protein (FLJ45537), mRNA
NM_0010017 Homo sapiens similar to 4931415M17 protein (LOC401565), mRNA
NM_0010017 Homo saplens DNA-damage inducible protein 1 (DDI1), mRNA
NM 0010017 Homo saplens lipocalin 10 (LCN10), mRNA
NM 0010017 Homo saplens SH3 domain binding glutamic acid-rich protein (SH3BGR), tra
NM 0010017 Homo sapiens FERM, RhoGEF (ARHGEF) and pleckstrin domain protein 1 (
NM 0010017 Homo saplens nuclear factor of kappa light polypeptide gene enhancer in B-c
NM 0010017; Homo sapiens chromodomain protein, Y chromosome, 2 related (CDY), mRN
NM 0010017; Homo saplens transmembrane protein 1 (TMEM1), transcript variant 2, mRN
NM 0010017; Homo sapiens Mahlavu hepatocellular carcinoma (HHCM), mRNA
NM 0010017; Homo saplens chromosome 10 open reading frame 130 (C10orf130), mRNA
NM_0010017: Homo saplens ATPase, Na+/K+ transporting, alpha 4 polypeptide (ATP1A4),
NM 0010017 Homo sapiens constitutive photomorphogenic protein (COP1), transcript vari
NM_0010017i Homo sapiens BRCC2 mRNA (BRCC2), mRNA
NM 0010017/ Homo sapiens ATPase, Na+/K+ transporting, beta 1 polypeptide (ATP1B1), t
NM 0010017 Homo sagiens chromosome 21 open reading frame 24 (C21orf24), mRNA
NM 0010017; Homo sapiens chromosome 9 open reading frame 105 (C9orf105), mRNA
NM 0010017 Homo sapiens chromosome 10 open reading frame 55 (C10orf55), mRNA
NM 0010017! Homo sapiens similar to RIKEN cDNA 1700027J05 gene (MGC33692), mRN
NM 0010017! Homo sapiens similar to RIKEN cDNA C030006K11 gene (MGC70857), mRI
NM 0010018/ Homo sapiens olfactory receptor, family 2, subfamily A, member 42 (OR2A4;
NM 0010018; Homo sapiens offactory receptor, family 2, subfamily T, member 34 (OR2T34)
NM 0010018: Homo sapiens olfactory receptor, family 2, subfamily T, member 27 (OR2T27
NM 0010018; Homo sapiens offactory receptor, family 2, subfamily T, member 35 (OR2T35
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NM 0010018! Homo sagiens similar to RIKEN cDNA A030009B12 gene (MGC21382), mR1

NM\_0010018: Homo sapiens inter-alpha (globulin) inhibitor H5 (ITIH5), transcript variant 3, NM\_0010018: Homo sapiens serine/threonine-protein kinase pim-3 (PIM3), mRNA

NM\_0010018 Homo sapiens hypothetical protein MGC14376 (MGC14376), transcript varia NM\_0010018 Homo sapiens heat shock transcription factor, Y-linked 1 (HSFY1), transcript

NM\_0010018: Homo sapiens chromosome 14 open reading frame 37 (C14orf37), mRNA NM\_0010018: Homo sapiens hypothetical protein LOC283174 (LOC283174), mRNA NM\_0010018: Homo sapiens protein kinase NYD-SP25 (NYD-SP25), transcript variant 2, m

NM\_0010018' Homo sapiens protein kinase NYD-SP25 (NYD-SP25), transcript variant 3, m NNM\_0010018' Homo sapiens heat shock transcription factor, Y linked 2 (HSFY2), transcript NM\_0010018' Homo sapiens heat shock transcription factor, Y linked 2 (HSFY2), transcript

NM\_0010018 Homo sapiens neat snock utanscription factor, Y linked 2 (nsr-12), utanscript NM\_0010018 Homo sapiens interferon-induced protein with tetratricopeptide repeats 1 (IFI NM\_0010018) Homo sapiens variably charged X-C (VCX-C), mRNA

NM\_0010018! Homo sapiens variably charged X-C (VCX-C), mRNA
NM\_0010018! Homo sapiens runt-related transcription factor 1 (acute myeloid leukemia 1; a

WC05944981 [ille:///E:/WC05944981.qpd]

NM\_0010018! Homo sapiens prostate cancer associated protein 5 (PCANAP5), transcript v NM\_0010018! Homo sapiens tetratricopeptide repeat domain 3 (TTC3), transcript variant 2,

NM\_0010018! Homo sapiens ubiquitin associated and SH3 domain containing, A (UBASH3 NM\_0010019: Homo sapiens olfactory receptor, family 4, subfamily E, member 2 (OR4E2), NM\_0010019: Homo sapiens olfactory receptor, family 52, subfamily N, member 1 (OR52N)

NM\_0010019: Homo sapiens offactory receptor, family 2, subfamily G, member 3 (OR2G3), NM\_0010019: Homo sapiens offactory receptor, family 2, subfamily G, member 2 (OR2G2), NM\_0010019: Homo sapiens offactory receptor, family 52, subfamily J, member 3 (OR52J3

NM\_0010019: Homo sapiens olfactory receptor, family 56, subfamily A, member 1 (OR56A-NM\_0010019: Homo sapiens olfactory receptor, family 5, subfamily BF, member 1 (OR5BF-NM\_0010019: Homo sapiens olfactory receptor, family 5, subfamily AS, member 1 (OR5AS

NM\_0010019; Homo sapiens olfactory receptor OR11-62 (OR11-62), mRNA

NM\_0010018: Homo sapiens mitochondrial tumor suppressor 1 (MTUS1), transcript variant NM\_0010018: Homo sapiens mitochondrial tumor suppressor 1 (MTUS1), transcript variant NM\_0010018: Homo sapiens mitochondrial tumor suppressor 1 (MTUS1), transcript variant NM\_001018: Homo sapiens peroxisome proliferative adviated receptor; ajbha (PPARA), tr NM\_0010018: Homo sapiens peroxisome proliferative adviated receptor, ajbha (PPARA), tr

NM\_0010019: Homo sapiens peroxisome proliferative activated receptor, alpha (PPARA), tr NM\_0010019: Homo sapiens mitochondrial tumor suppressor 1 (MTUS1), transcript variant

NM\_0010019; Homo sapiens LIM homeobox 8 (LHX8), mRNA

NM\_0010019: Homo saplens ATP synthase, H+ transporting, mitochondrial F1 complex, alr NM\_0010019: Homo saplens KIAA1914 (KIAA1914), transcript variant 1, mRNA

NM\_0010019: Homo saplens ATP synthase, H+ transporting, mitochondrial F1 complex, alp NM\_0010019: Homo saplens chromosome 9 open reading frame 47 (C9orf47), nRNA NM\_0010019: Homo saplens 6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of i

NM\_0010019: Homo sapiens of actory receptor, family 10, subfamily G, member 9 (OR10G NM\_0010019! Homo sapiens olfactory receptor, family 10, subfamily G, member 9 (OR10G NM\_0010019! Homo sapiens olfactory receptor, family 5, subfamily A, member 2 (OR5A2).

NM\_0010019! Homo saplens olfactory receptor, family 5, subfamily A, member 2 (ORSA2), NM\_0010019! Homo saplens olfactory receptor, family 13, subfamily C, member 9 (OR13C: NM\_0010019! Homo saplens olfactory receptor, family 2, subfamily W, member 3 (OR2W3.)

NM\_0101019: Homo sapiens olfactory receptor, family 2, subramily 4, member 3 (ORZ93), NM\_0101019: Homo sapiens olfactory receptor, family 11, subfamily G, member 3 (ORZ93), NM\_0101019: Homo sapiens olfactory receptor, family 11, subfamily L, member 1 (ORT11.1)

NM\_0010019I Homo sapiens olfactory receptor, family 5, subfamily W, member 2 (DR5W2; NM\_0010019I Homo sapiens olfactory receptor, family 13, subfamily C, member 3 (DR13C: NM\_0010019I Homo sapiens olfactory receptor, family 6, subfamily B, member 2 pseudone

NM\_0010019H Homo sapiens olfactory receptor, family 2, subfamily L, member 8 (CR2L8), INM\_010019H Homo sapiens olfactory receptor, family 2, subfamily T, member 11 (OR2T11 NM\_0101019H Homo sapiens olfactory receptor, family 4, subfamily D, member 5 (CR4D5).

NM\_00100191Homo sapiens olfactory receptor, family 5, subfamily AT, member 1 (OR5AT-NM\_00100191Homo sapiens olfactory receptor, family 5, subfamily D, member 13 (OR5D1: NM\_00100191Homo sapiens olfactory receptor, family 6, subfamily S, member 1 (OR6S1), NM\_00100191Homo sapiens family with sequence similarity 13, member C1 (FAM13C1), tr

NM\_0010019 Homo sapiens family with sequence similarity 1s, member Of (r-AwilsOr), MM\_0010019 Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, ga NM\_0010019 Homo sapiens pleckstrin homology domain containing, family A (phosphoino

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NM 0010019' Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, de NM 0010019 Homo sapiens arginyltransferase 1 (ATE1), transcript variant 1, mRNA NM 0010019 Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, ep NM\_0010019! Homo sapiens regeneration associated muscle protease (DKFZP586H2123) NM\_0010019! Homo sapiens ubiquitin specific protease 16 (USP16), transcript variant 2, m NM\_0010019! Homo sapiens glycoprotein M6B (GPM6B), transcript variant 4, mRNA NM\_0010019! Homo sapiens glycoprotein M6B (GPM6B), transcript variant 1, mRNA NM\_0010019! Homo sapiens glycoprotein M6B (GPM6B), transcript variant 2, mRNA NM\_0010019! Homo sapiens exosome component 10 (EXOSC10), transcript variant 1, mRI NM\_0010020(Homo sapiens guanosine monophosphate reductase 2 (GMPR2), transcript v NM 0010020 Homo sapiens quanosine monophosphate reductase 2 (GMPR2), transcript v NM 0010020 Homo sapiens quanosine monophosphate reductase 2 (GMPR2), transcript v NM 0010020i Homo sapiens 5'-nucleotidase, cytosolic IB (NT5C1B), transcript variant 1, m NM 0010020 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM 0010020 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM\_0010020 Homo sapiens host cell factor C1 regulator 1 (XPO1 dependant) (HCFC1R1) NM\_0010020 Homo sapiens host cell factor C1 regulator 1 (XPO1 dependant) (HCFC1R1) NM\_0010020: Homo saplens phosphofructokinase, liver (PFKL), transcript variant 1, mRNA NM\_0010020; Homo saplens claudin 18 (CLDN18), transcript variant 2, mRNA NM\_0010020; Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM 0010020; Homo sapiens complement component 4B, centromeric (C4B), mRNA NM 0010020; Homo saplens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM 0010020; Homo sapiens hematological and neurological expressed 1 (HN1), transcript NM\_0010020. Homo sapiens hematological and neurological expressed 1 (HN1), transcript NM 0010020; Homo sapiens defensin, beta 108 (DEFB108), mRNA NM 0010020; Homo sapiens astacin-like metalloendopeptidase (M12 family) (ASTL), mRN, NM\_0010022 Homo sapiens kallikrein 2, prostatic (KLK2), transcript variant 2, mRNA NM\_0010022: Homo sapiens kallikrein 2, prostatic (KLK2), transcript variant 3, mRNA NM 0010022; Homo sapiens RAB11 family interacting protein 1 (class I) (RAB11FIP1), tran-NM 0010022 Homo saplens sodium channel modifier 1 (SCNM1), transcript variant 2, mRI NM 0010022: Homo sapiens serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antii NM\_0010022 Homo sapiens serine (or cysteine) proteinase inhibitor, clade A (alpha-1 anti-NM 0010022 Homo sapiens aftiphilin protein (AFTIPHILIN), transcript variant 3, mRNA NM 0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ve NM 0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ve NM\_0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ye NM\_0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ye NM\_0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ye NM\_0010022 Homo sapiens APC11 anaphase promoting complex subunit 11 homolog (ye NM 0010022 Home sapiens ADP-ribosylation-like factor 6 interacting protein 4 (ARL6IP4). NM 0010022 Homo sapiens ADP-ribosylation-like factor 6 interacting protein 4 (ARL6IP4), NM 0010022 Homo sapiens SMT3 suppressor of mif two 3 homolog 4 (yeast) (SUMO4), rr NM 0010022! Homo saplens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM 0010022! Homo sapiens acyl-CoA; lysocardiolipin acyltransferase 1 (ALCAT1), transcrip NM 0010022! Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM 0010022! Homo saplens C1q domain containing 1 (C1QDC1), transcript variant 1, mR1 NM\_0010022t Homo sapiens chromosome 9 open reading frame 58 (C9orf58), transcript ve NM\_0010022/ Homo sapiens zinc finger, FYVE domain containing 27 (ZFYVE27), transcrip NM\_0010022/Homo sapiens zinc finger, FYVE domain containing 27 (ZFYVE27), transcrip NM\_0010022/ Homo sapiens epithelial stromal interaction 1 (breast) (EPSTI1), mRNA NM 0010022/ Homo sapiens c-mir, cellular modulator of immune recognition (MIR), transcr NM 0010022/ Homo sapiens c-mir, cellular modulator of immune recognition (MIR), transcr NM 0010022/ Homo sapiens exosome component 3 (EXOSC3), transcript variant 2, mRNA NM 0010022' Homo sapiens Fc fragment of IgG, low affinity IIb, receptor for (CD32) (FCGF NM 0010022' Homo sapiens Fc fragment of IgG, low affinity IIb, receptor for (CD32) (FCGF NM 0010022' Homo sapiens Fc fragment of IgG, low affinity IIb, receptor for (CD32) (FCGF NM 0010022! Home sapiens putative NFkB activating protein 373 (FLJ23091), transcript ve

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NM 0010022! Homo sapiens flavin containing monooxygenase 3 (FMO3), transcript variant NM\_0010022! Homo sapiens GATA binding protein 3 (GATA3), transcript variant 1, mRNA NM\_0010022! Homo sapiens golgi autoantigen, golgin subfamily a, 7 (GOLGA7), transcript NM\_0010027! Homo sapiens HIRA interacting protein 5 (HIRIP5), transcript variant 2, mRN NM\_0010027! Homo sapiens HIRA interacting protein 5 (HIRIP5), transcript variant 3, mRN NM\_0010027! Homo sapiens HIRA interacting protein 5 (HIRIP5), transcript variant 4, mRN NM\_0010027/ Homo sapiens PTPN13-like, Y-linked, centromeric (PRY), mRNA NM\_0010027! Homo sapiens chromosome 10 open reading frame 78 (C10orf78), transcript NM\_0010027(Homo sapiens basic charge, Y-linked, 2 (BPY2), mRNA NM\_0010027(Homo sapiens basic charge, Y-linked, 2 (BPY2), mRNA NM\_0010027(Homo sapiens DnaJ (Hsp40) homolog, subfamily B, member 12 (DNAJB12), NM\_0010027! Homo sapiens multiple C2-domains with two transmembrane regions 1 (MC1 NM 0010027! Homo sapiens SMC4 structural maintenance of chromosomes 4-like 1 (yeas) NM\_0010028 Homo sapiens SMC4 structural maintenance of chromosomes 4-like 1 (yeas) NM\_0010028 Homo sapiens phosphodiesterase 4D Interacting protein (myomegalin) (PDE NM\_0010028 Homo sapiens phosphodiesterase 4D interacting protein (myomegalin) (PDE NM\_0010028 Homo sapiens phosphodiesterase 4D Interacting protein (myomegalin) (PDE NM\_0010028 Homo sapiens RAB11 family interacting protein 1 (class I) (RAB11FIP1), trar NM\_0010028 Homo sapiens hypothetical protein LOC126208 (LOC126208), mRNA NM\_0010028; Homo sapiens phosphatidylinositol (4,5) blsphosphate 5-phosphatase, A (PII NM\_0010028 Homo saplens protein kinase, lysine deficient 3 (PRKWNK3), transcript varia NM\_0010028 Homo sapiens DKFZp434A0131 protein (DKFZP434A0131), transcript variar NM\_0010028 Homo sapiens myosin, light polypeptide 4, alkali; atrial, embryonic (MYL4), tr NM\_0010028 Homo sapiens suppressor of halry wing homolog 4 (Drosophila) (SUHW4), tr NM\_0010028 Homo sapiens suppressor of hairy wing homolog 4 (Drosophila) (SUHW4), tr NM\_0010028 Homo sapiens suppressor of hairy wing homolog 4 (Drosophila) (SUHW4), tr NM\_0010028 Homo sapiens CTF8, chromosome transmission fidelity factor 8 homolog (S. NM\_0010028 Homo saplens lymphocyte antigen 6 complex, locus G5C (LY6G5C), transcri NM\_0010028 Homo sapiens lymphocyte antigen 6 complex, locus G5C (LY6G5C), transcri NM\_0010028 Homo sapiens annexin A2 (ANXA2), transcript variant 2, mRNA NM\_0010028 Homo sapiens annexin A2 (ANXA2), transcript variant 1, mRNA NM\_0010028/ Homo sapiens BTB (POZ) domain containing 7 (BTBD7), transcript variant 1. NM 0010028/Homo sapiens Rho guanine nucleotide exchange factor (GEF) 5 (ARHGEF5) NM 0010028i Homo sapiens chromosome 22 open reading frame 14 (C22orf14), transcript NM\_0010028 Homo sapiens chromosome 22 open reading frame 18 (C22orf18), transcript NM\_0010028' Homo sapiens chromosome 22 open reading frame 19 (C22orf19), transcript NM\_0010028 Homo sapiens chromosome 22 open reading frame 19 (C22orf19), transcript NM\_0010028 Homo sapiens chromosome 22 open reading frame 19 (C22orf19), transcript NM\_0010028l Homo sapiens chromosome 22 open reading frame 2 (C22orf2), transcript vs NM\_0010028l Homo saplens phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinas NM\_0010029l Homo sapiens hypothetical protein FLJ31052 (FLJ31052), mRNA NM\_0010029 Homo saplens olfactory receptor, family 8, subfamily G, member 1 (OR8G1P NM\_0010029l Homo sapiens X Kell blood group precursor-related, Y-linked 2 (XKRY2), mR NM\_0010029l Homo saplens olfactory receptor, family 8, subfamily K, member 1 (OR8K1), NM 0010029 Homo sapiens KIAA0553 protein (KIAA0553), mRNA NM\_0010029 Homo sapiens cytochrome P450, family 2, subfamily D, polypeptide 7 pseudo NM\_0010029 Homo sapiens G protein-coupled receptor 139 (GPR139), mRNA NM\_0010029 Homo sapiens chromosome 9 open reading frame 115 (C9orf115), mRNA NM\_0010029 Homo sapiens potassium channel tetramerisation domain containing 11 (KC) NM\_0010029 Homo saplens insulin growth factor-like family member 2 (IGFL2), mRNA NM 0010029 Homo sapiens H2B histone family, member W, testis-specific (H2BFWT), mf NM 0010029 Homo sapiens olfactory receptor, family 8, subfamily D, member 1 (OR8D1), NM\_0010029 Homo sapiens olfactory receptor, family 8, subfamily D, member 2 (OR8D2), NM\_0010029 Homo sapiens hypothetical protein LOC285016 (LOC285016), mRNA NM\_0010029: Homo sapiens protein expressed in prostate, ovary, testis, and placenta 8 (P NM 0010029; Homo sapiens adenylate kinase 3-like 2 (AK3L2), mRNA NM 0010029; Homo sapiens similar to PM5 (FLJ43542), mRNA

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NM\_0010029: Homo sapiens insulin growth factor-like family member 4 (IGFL4), mRNA NM\_0010028: Homo sapiens adaptor-related protein complex 3, sigma 1 subunit (APSS1), NM\_0010029: Homo sapiens olfactory receptor, family 5, subfamily AF, member 2 (OR5AP NM\_0010029: Homo sapiens TWIST neighbor (TWISTNB), mRNA. NM\_0010038: Homo sapiens Bleaudal D homolog 1 (Drosophis) (BICD1), transcript variant NM\_0010038: Homo sapiens DKF2p451A211 protein (DKF2p451A211), mRNA. NM\_0010038: Homo sapiens acidum channel, woltage-dependent, alpha 11 subunit (CACN. NM\_0010034: Homo sapiens calcium channel, woltage-dependent, alpha 11 subunit (CACN. NM\_0010034: Homo sapiens calcium channel, woltage-dependent, alpha 11 subunit (CACN. NM\_0010034: Homo sapiens calcium channel).

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NM\_0010036/Homo sapiens protein phosphatase 2, regulatory subunit B, deta Isoform (PF NM\_0010036/Homo sapiens similar to hypothetical protein Y97E10AL.1 (DKFZp761P211), MM\_0010036/Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript vs NM\_0010036/Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript vs NM\_0010036/Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript vs

NM\_0010036 Homo sapiens chromosome 18 open reading frame 1 (C18orf1), trans NM\_0010036 Homo sapiens leptin receptor (LEPR), transcript variant 2, mRNA NM\_0010036i Homo sapiens leptin receptor (LEPR), transcript variant 3, mRNA

NM\_001079 Homo sapiens legant Legant, Licaryn, transcript Variant s, mrwd, NM\_001079 Homo sapiens zeta-chain (TCR) associated protein kinase 70kDa (ZAP70), t NM\_001132 Homo sapiens AFG3 ATPase familty gene 3-like 1 (yeast) (AFG3L1), mRNA NM\_001222 Homo sapiens caldum/caimodulin-dependent protein kinase (CaM kinase) II

NM\_001369 Homo sapiens dynein, axonemal, heavy polypeptide 5 (DNAH5), mRNA
NM\_001376 Homo sapiens dynein, cytoplasmic, heavy polypeptide 1 (DNCH1), mRNA

NM\_001378 Homo saplens dynein, cytoplasmic, intermediate polypeptide 2 (DNCI2), mRI NM\_001410 Homo saplens ESF-like-domain, multiple 4 (ESFLA), mRNA NM\_001547 Homo saplens interferon-induced protein with tetratricopeptide repeats 2 (IFI

NM\_001556 Homo sapiens inhibitor of kappa light polypeptide gene enhancer in B-cells, I NM\_001636 Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleo NM\_001763 Homo sapiens CD14 antigien, a polypeptide (CD14), mRNA

NM\_001810 Homo sapiens centromere protein B, 80kDa (CENPB), mRNA

NM\_001931 Homo sapiens dihydrolipoamlde S-acetyltransferase (E2 component of pyruv NM\_001947 Homo sapiens dual specificity phosphatase 7 (DUSP7), mRNA

NM\_001984 Homo sapiens esterase D/formylglutathione hydrolase (ESD), mRNA

NM\_001986 Homo sapiens ets variant gene 4 (E1A enhancer binding protein, E1AF) (ETNM\_002154 Homo sapiens heat shock 70kDa protein 4 (HSPA4), transcript variant 1, mR

NM\_002242 Homo saplens potassium inwardly-rectifying channel, subfamily J, member 1 NM\_002348 Homo saplens lymphocyte antigen 9 (LY9), mRNA

NM\_002399 Homo sapiens Meis1, myeloid ecotropic viral Integration site 1 homolog 2 (m

NM\_002404 Homo sapiens microfibrillar-associated protein 4 (MFAP4), mRNA NM\_002471 Homo sapiens myosin, heavy polypeptide 6, cardiac muscle, alpha (cardiom, NM\_002488 Homo sapiens NIMA (never in mitosis gene a)-related kinase 3 (NEK3), trans

NM\_002523 Homo sapiens neuronal pentraxin II (NPTX2), mRNA

NM\_002596 Homo sapiens PCTAIRE protein kinase 3 (PCTK3), transcript variant 3, mRN NM\_002603 Homo sapiens phosphodiesterase 7A (PDE7A), transcript variant 1, mRNA

NM\_002604 Homo sapiens phosphodiesterase 7A (PDE7A), transcript variant 2, mRNA NM\_002605 Homo sapiens phosphodiesterase 8A (PDE8A), transcript variant 1, mRNA

NM\_002679 Homo sapiens postmeiotic segregation increased 2-like 2 (PMS2L2), mRNA NM\_002735 Homo sapiens protein kinase, cAMP-dependent, regulatory, type I, beta (PRI

NM\_002746 Homo sapiens protein kinase, cAMP-dependent, regulatory, type I, beta (PRI NM\_002746 Homo sapiens mitogen-activated protein kinase 3 (MAPK3), mRNA NM\_002791 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 6 (PSI

NM\_002791 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 6 (PSI NM\_002798 Homo sapiens proteasome (prosome, macropain) subunit, beta type, 6 (PSI NM\_00272 Homo sapiens SFT birding factor 1 (SBE1) transcript in spirit 1 september 1.

NM\_002972 Homo sapiens SET binding factor 1 (SBF1), transcript variant 1, mRNA NM\_002974 Homo sapiens serine (or cysteine) proteinase Inhibitor, clade B (ovalbumin),

NM\_002998 Homo sapiens syndecan 2 (heparan sulfate proteoglycan 1, cell surface-asson NM\_003013 Homo sapiens secreted frizzled-related protein 2 (SFRP2), mRNA

NM\_003047 Homo sapiens solute carrier family 9 (sodium/hydrogen exchanger), isoform NM\_003106 Homo sapiens SRY (sex determining region Y)-box 2 (SOX2), mRNA

NM\_003101 Homo sapiens SRY (sex determining region Y)-box 2 (SC NM\_003111 Homo sapiens Sp3 transcription factor (SP3), mRNA

NM\_003179 Homo sapiens synaptophysin (SYP), mRNA

NM\_003196 Homo sapiens transcription elongation factor A (SII), 3 (TCEA3), mRNA

NM\_003200 Homo sapiens transcription factor 3 (E2A immunoglobulin enhancer binding

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NM\_003302 Homo sapiens thyroid hormone receptor interactor 6 (TRIP6), mRNA NM\_003415 Homo sapiens zinc finger protein 268 (ZNF268), mRNA NM\_003444 Homo sapiens zinc finger protein 154 (pHZ-92) (ZNF154), mRNA NM\_003502 Homo sapiens axin 1 (AXIN1), transcript variant 1, mRNA NM\_003517 Homo sapiens histone 2, H2ac (HIST2H2AC), mRNA NM 003575 Homo sapiens zinc finger protein 282 (ZNF282), mRNA NM\_003598 Homo sapiens TEA domain family member 2 (TEAD2), mRNA NM\_003638 Homo sapiens integrin, alpha 8 (ITGA8), mRNA NM\_003660 Homo sapiens protein tyrosine phosphatase, receptor type, f polypeptide (PT NM\_003677 Homo sapiens density-regulated protein (DENR), mRNA NM 003700 Homo sapiens olfactory receptor, family 2, subfamily D, member 2 (OR2D2). NM 003719 Homo sapiens phosphodiesterase 8B (PDE8B), mRNA NM\_003724 Homo sapiens jerky homolog (mouse) (JRK), mRNA NM\_003741 Homo sapiens chordin (CHRD), transcript variant 1, mRNA NM\_003817 Homo sapiens a disintegrin and metalloproteinase domain 7 (ADAM7), mRN. NM\_003818 Homo sapiens CDP-diacylglycerol synthase (phosphatidate cytidylyltransfera NM 003828 Homo sapiens myotubularin related protein 1 (MTMR1), transcript variant 1, I NM\_003845 Homo sapiens dual-specificity tyrosine-(Y)-phosphorylation regulated kinase NM\_003848 Homo sapiens succinate-CoA ligase, GDP-forming, beta subunit (SUCLG2), NM 003858 Homo sapiens cyclin K (CCNK), mRNA NM\_003898 Homo sapiens synaptojanin 2 (SYNJ2), mRNA NM\_003907 Homo saplens eukaryotic translation initiation factor 2B, subunit 5 epsilon, 82 NM\_003957 Homo sapiens serine/threonine kinase 29 (STK29), mRNA NM\_003959 Homo sapiens huntingtin interacting protein-1-related (HIP1R), mRNA NM\_003972 Homo sapiens BTAF1 RNA polymerase II, B-TFIID transcription factor-assoc NM 004080 Homo sapiens diacylglycerol kinase, beta 90kDa (DGKB), transcript variant 1 NM 004097 Homo sapiens empty spiracles homolog 1 (Drosophila) (EMX1), mRNA NM 004118 Homo sapiens forkhead-like 18 (Drosophila) (FKHL18), mRNA NM 004136 Homo sapiens Iron-responsive element binding protein 2 (IREB2), mRNA NM 004200 Homo sapiens synaptotagmin VII (SYT7), mRNA NM 004220 Homo sapiens zinc finger protein 213 (ZNF213), mRNA NM\_004241 Homo sapiens jumonji domain containing 1C (JMJD1C), mRNA NM 004242 Homo sapiens high mobility group nucleosomal blnding domain 3 (HMGN3). NM 004319 Homo sapiens astrotactin (ASTN), transcript variant 1, mRNA NM\_004439 Homo sapiens EphA5 (EPHA5), transcript variant 1, mRNA NM\_004498 Homo sapiens one cut domain, family member 1 (ONECUT1), mRNA NM\_004650 Homo sapiens GS2 gene (DXS1283E), mRNA NM 004685 Homo saplens myotubularin related protein 6 (MTMR6), mRNA NM 004691 Homo sapiens ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d isoft NM 004764 Homo sapiens piwi-like 1 (Drosophila) (PIWIL1), mRNA NM 004773 Homo sapiens thyroid hormone receptor interactor 3 (TRIP3), mRNA NM 004816 Homo saplens chromosome 9 open reading frame 61 (C9orf61), mRNA NM 004840 Homo sapiens Rac/Cdc42 guanine nucleotide exchange factor (GEF) 6 (ARI-NM\_004884 Homo sapiens putative neuronal cell adhesion molecule (PUNC), mRNA NM\_004946 Homo sapiens dedicator of cytokinesis 2 (DOCK2), mRNA NM\_004947 Homo saplens dedicator of cytokinesis 3 (DOCK3), mRNA NM 005054 Homo sapiens RAN binding protein 2-like 1 (RANBP2L1), transcript variant 1 NM 005105 Homo sapiens RNA binding motif protein 8A (RBM8A), mRNA NM 005126 Homo sapiens nuclear receptor subfamily 1, group D, member 2 (NR1D2), rr NM 005140 Homo sapiens cyclic nucleotide gated channel alpha 2 (CNGA2), mRNA NM\_005144 Homo sapiens hairless homolog (mouse) (HR), transcript variant 1, mRNA NM 005153 Homo sapiens ubiquitin specific protease 10 (USP10), mRNA NM 005202 Homo sapiens collagen, type VIII, alpha 2 (COL8A2), mRNA NM 005240 Homo sapiens ets variant gene 3 (ETV3), mRNA NM\_005241 Homo sapiens ecotropic viral integration site 1 (EVI1), mRNA

NM 005250 Homo sapiens forkhead box L1 (FOXL1), mRNA

NM 005272 Homo sapiens quanine nucleotide binding protein (G protein), alpha transduc

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- NM 005278 Homo sapiens glycoprotein M6B (GPM6B), transcript variant 3, mRNA
- NM\_005349 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NM 005376 Homo sapiens v-myc myelocytomatosis viral oncogene homolog 1, lung carc
- NM 005407 Homo sapiens sal-like 2 (Drosophila) (SALL2), mRNA
- NM\_005482 Homo sapiens phosphatidylinositol glycan, class K (PIGK), mRNA
- NM 005487 Homo sapiens high-mobility group protein 2-like 1 (HMG2L1), mRNA
- NM\_005533 Homo sapiens interferon-induced protein 35 (IFI35), mRNA
- NM\_005559 Homo sapiens laminin, alpha 1 (LAMA1), mRNA

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- NM 005595 Homo sapiens nuclear factor I/A (NFIA), mRNA
- NM\_005650 Homo sapiens transcription factor 20 (AR1) (TCF20), transcript variant 1, mF
- NM\_005669 Homo sapiens chromosome 5 open reading frame 18 (C5orf18), mRNA
- NM\_005680 Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polyn
- NM 005702 Homo sapiens Era G-protein-like 1 (E, coli) (ERAL1), mRNA
- NM 005707 Homo sapiens programmed cell death 7 (PDCD7), mRNA
- NM 005779 Homo sapiens lipoma HMGIC fusion partner-like 2 (LHFPL2), mRNA
- NM 005788 Homo sapiens HMT1 hnRNP methyltransferase-like 3 (S. cerevisiae) (HRMT
- NM 005791 Homo sapiens M-phase phosphoprotein 10 (U3 small nucleolar ribonucleopre
- NM\_005840 Homo sapiens sprouty homolog 3 (Drosophila) (SPRY3), mRNA
- NM\_005841 Homo sapiens sprouty homolog 1, antagonist of FGF signaling (Drosophila) ( NM\_005848 Homo sapiens c-myc promoter binding protein (MYCPBP), mRNA
- NM 005914 Homo sapiens MCM4 minichromosome maintenance deficient 4 (S. cerevisia
- NM 005942 Homo sapiens molybdenum cofactor synthesis 1 (MOCS1), transcript variant
- NM 005943 Homo sapiens molybdenum cofactor synthesis 1 (MOCS1), transcript variant
- NM\_005946 Homo sapiens metallothionein 1A (functional) (MT1A), mRNA
- NM 005947 Homo sapiens metallothlonein 1B (functional) (MT1B), mRNA
- NM\_005949 Homo sapiens metallothionein 1F (functional) (MT1F), mRNA
- NM 005964 Homo sapiens myosin, heavy polypeptide 10, non-muscle (MYH10), mRNA
- NM 005984 Homo sapiens solute carrier family 25 (mitochondrial carrier; citrate transport
- NM 005995 Homo saplens T-box 10 (TBX10), mRNA
- NM 006036 Homo sapiens putative prolyl oligopeptidase (KIAA0436), mRNA
- NM 006040 Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 4 (HS3S1)
- NM 006062 Homo sapiens SMYD family member 5 (SMYD5), mRNA
- NM 006091 Homo saplens coronin, actin binding protein, 2B (CORO2B), mRNA
- NM\_006108 Homo sapiens spondin 1, extracellular matrix protein (SPON1), mRNA
- NM 006133 Homo sapiens chromosome 11 open reading frame 11 (C11orf11), mRNA
- NM 006151 Homo sapiens lactoperoxidase (LPO), mRNA NM 006154 Homo saplens neural precursor cell expressed, developmentally down-regula
- NM 006172 Homo saplens natriuretic peptide precursor A (NPPA), mRNA
- NM\_006175 Homo sapiens nebulin-related anchoring protein (NRAP), transcript variant 1
- NM\_006210 Homo sapiens paternally expressed 3 (PEG3), mRNA
- NM\_006216 Homo sapiens serine (or cysteine) proteinase inhibitor, clade E (nexin, plasm
- NM 006266 Homo sapiens ral quanine nucleotide dissociation stimulator (RALGDS), mRI
- NM\_006277 Homo sapiens intersectin 2 (ITSN2), transcript variant 1, mRNA
- NM 006452 Homo sapiens phosphoribosylaminoimidazole carboxylase, phosphoribosyla
- NM 006524 Homo saplens zinc finger protein 138 (clone pHZ-32) (ZNF138), mRNA
- NM 006591 Homo sapiens polymerase (DNA-directed), delta 3, accessory subunit (POLE
- NM 006617 Homo sapiens nestin (NES), mRNA
- NM 006630 Homo sapiens zinc finger protein 234 (ZNF234), mRNA
- NM 006631 Homo sapiens zinc finger protein 266 (ZNF266), mRNA
- NM 006635 Homo sapiens zinc finger protein 272 (ZNF272), mRNA
- NM\_006642 Homo sapiens serologically defined colon cancer antigen 8 (SDCCAG8), mR
- NM\_006647 Homo sapiens NADPH oxidase activator 1 (NOXA1), mRNA
- NM\_006673 Homo sapiens AT rich interactive domain 5A (MRF1-like) (ARID5A), transcrit
- NM 006714 Homo sapiens sphingomyelin phosphodiesterase, acid-like 3A (SMPDL3A), I
- NM 006722 Homo sapiens microphthalmia-associated transcription factor (MITF), transcr
- NM 006742 Homo sapiens protein serine kinase H1 (PSKH1), mRNA
- NM 006775 Homo sapiens quaking homolog, KH domain RNA binding (mouse) (QKI), tra

NM\_006828 Homo sapiens activating signal cointegrator 1 complex subunit 3 (ASCC3), ri NM\_006832 Homo sapiens pleckstrin homology domain containing, family C (with FERM NM\_006857 Homo sapiens putative nucleic acid binding protein RY-1 (RY1), mRNA NM\_006859 Homo sapiens lipoic acid synthetase (LIAS), nuclear gene encoding mitocho NM\_006897 Homo sapiens homeo box C9 (HOXC9), mRNA NM 006909 Homo sapiens Ras protein-specific guanine nucleotide-releasing factor 2 (R/ NM 006916 Homo sapiens ribulose-5-phosphate-3-epimerase (RPE), transcript variant 2. NM 006920 Homo sapiens sodium channel, voltage-gated, type I, alpha (SCN1A), mRNA NM 006939 Homo sapiens son of sevenless homolog 2 (Drosophila) (SOS2), mRNA NM\_006955 Homo sapiens zinc finger protein 11b (KOX 2) (ZNF11B), mRNA NM\_006956 Homo sapiens zinc finger protein 12 (KOX 3) (ZNF12), mRNA NM\_006959 Homo sapiens zinc finger protein 17 (HPF3, KOX 10) (ZNF17), mRNA NM\_006961 Homo sapiens zinc finger protein 19 (KOX 12) (ZNF19), mRNA NM\_006969 Homo sapiens zinc finger protein 28 (KOX 24) (ZNF28), mRNA NM\_006973 Homo sapiens zinc finger protein 32 (KOX 30) (ZNF32), mRNA NM\_006974 Homo sapiens zinc finger protein 33a (KOX 31) (ZNF33A), mRNA NM\_006996 Homo sapiens solute carrier family 19 (thiamlne transporter), member 2 (SLC NM\_007001 Homo sapiens solute carrier family 35, member D2 (SLC35D2), mRNA NM\_007010 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 52 (DDX52), transc NM 007041 Homo sapiens arginyltransferase 1 (ATE1), transcript variant 2, mRNA NM\_007078 Homo sapiens LIM domain binding 3 (LDB3), mRNA NM\_007130 Homo sapiens zinc finger protein 41 (ZNF41), transcript variant 1, mRNA NM\_007131 Homo saplens zinc finger protein 75 (D8C6) (ZNF75), mRNA NM\_007135 Homo sapiens zinc finger protein 79 (pT7) (ZNF79), mRNA NM\_007137 Homo sapiens zinc finger protein 81 (HFZ20) (ZNF81), mRNA NM\_007139 Homo sapiens zinc finger protein 92 (HTF12) (ZNF92), mRNA NM\_007149 Homo sapiens zinc finger protein 184 (Kruppel-like) (ZNF184), mRNA NM\_007156 Homo sapiens zinc finger, X-linked, duplicated A (ZXDA), mRNA NM 007157 Homo sapiens zinc finger, X-linked, duplicated B (ZXDB), mRNA NM\_007162 Homo sapiens transcription factor EB (TFEB), mRNA NM\_007174 Homo saplens citron (rho-interacting, serine/threonine kinase 21) (CIT), mRN NM\_007189 Homo sapiens ATP-binding cassette, sub-family F (GCN20), member 2 (ABC NM\_007224 Homo sapiens neurexophilin 4 (NXPH4), mRNA NM\_007225 Homo sapiens neurexophilin 3 (NXPH3), mRNA NM\_007243 Homo sapiens nurim (nuclear envelope membrane protein) (NRM), mRNA NM\_007261 Homo sapiens leukocyte membrane antigen (CMRF-35H), mRNA NM\_007270 Homo sapiens FK506 binding protein 9, 63 kDa (FKBP9), mRNA NM\_007277 Homo sapiens SEC6-like 1 (S. cerevislae) (SEC6L1), mRNA NM\_007280 Homo sapiens Ope-interacting protein 5 (OIP5), mRNA NM\_007349 Homo sapiens PAX transcription activation domain interacting protein 1 like ( NM\_007356 Homo sapiens laminin, beta 4 (LAMB4), mRNA NM\_012073 Homo sapiens chaperonin containing TCP1, subunit 5 (epsilon) (CCT5), mRI NM\_012154 Homo sapiens eukaryotic translation initiation factor 2C, 2 (EIF2C2), mRNA NM\_012156 Homo sapiens erythrocyte membrane protein band 4.1-like 1 (EPB41L1), trai NM\_012167 Homo sapiens F-box protein 11 (FBXO11), transcript variant 3, mRNA NM 012174 Homo sapiens F-box and WD-40 domain protein 8 (FBXW8), transcript varia NM\_012184 Homo sapiens forkhead box D4 like 1 (FOXD4L1), mRNA NM\_012212 Homo sapiens leukotriene B4 12-hydroxydehydrogenase (LTB4DH), mRNA NM 012224 Homo sapiens NIMA (never in mitosis gene a)-related kinase 1 (NEK1), mRN NM 012232 Homo sapiens polymerase I and transcript release factor (PTRF), mRNA NM 012235 Homo sapiens SREBP CLEAVAGE-ACTIVATING PROTEIN (SCAP), mRNA NM\_012271 Homo sapiens huntingtin interacting protein B (HYPB), transcript variant 2, m NM\_012272 Homo sapiens Huntingtin interacting protein C (HYPC), mRNA NM\_012284 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I NM\_012292 Homo sapiens minor histocompatibility antigen HA-1 (HA-1), mRNA NM\_012305 Homo sapiens adaptor-related protein complex 2, alpha 2 subunit (AP2A2), r

NM\_012309 Homo sapiens SH3 and multiple ankyrin repeat domains 2 (SHANK2), transc

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NM\_012315 Homo sapiens kallikrein 9 (KLK9), mRNA NM 012335 Homo sapiens myosin IF (MYO1F), mRNA NM\_012363 Homo sapiens olfactory receptor, family 1, subfamily N, member 1 (OR1N1), NM 012364 Homo sapiens olfactory receptor, family 1, subfamily Q, member 1 (OR1Q1),

NM\_012367 Homo sapiens olfactory receptor, family 2, subfamily B, member 6 (OR2B6), NM 012374 Homo sapiens offactory receptor, family 4, subfamily D, member 1 (OR4D1), NM 012378 Homo sapiens olfactory receptor, family 8, subfamily B, member 8 (OR8B8),

NM 012393 Homo sapiens phosphoribosylformylglycinamidine synthase (FGAR amidotra NM 012398 Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type I, gamma (PI

NM 012416 Homo sapiens RAN binding protein 6 (RANBP6), mRNA NM 012477 Homo sapiens WW domain binding protein 1 (WBP1), mRNA

NM\_012478 Homo sapiens WW domain binding protein 2 (WBP2), mRNA NM\_013304 Homo sapiens zinc finger, DHHC domain containing 1 (ZDHHC1), mRNA

NM 013321 Homo sapiens sorting nexin 8 (SNX8), mRNA NM\_013373 Homo sapiens zinc finger, DHHC domain containing 8 (ZDHHC8), mRNA

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NM 014010 Homo sapiens astrotactin 2 (ASTN2), transcript variant 1, mRNA

NM\_014014 Homo sapiens U5 snRNP-specific protein, 200-KD (U5-200KD), mRNA NM\_014089 Homo sapiens nucleoporin like 1 (NUPL1), mRNA

NM\_014098 Homo saplens peroxiredoxin 3 (PRDX3), nuclear gene encoding mitochondri

NM 014215 Homo sapiens insulin receptor-related receptor (INSRR), mRNA NM 014220 Homo sapiens transmembrane 4 superfamily member 1 (TM4SF1), mRNA

NM 014224 Homo sapiens pepsinogen 5, group I (pepsinogen A) (PGA5), mRNA

NM 014243 Homo saplens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_014261 Homo sapiens TIR domain containing adaptor inducing interferon-beta (TRIF

NM 014282 Homo sapiens hyaluronan binding protein 4 (HABP4), mRNA

NM\_014284 Homo sapiens neurochondrin (NCDN), mRNA

NM\_014290 Homo sapiens tudor domain containing 7 (TDRD7), mRNA

NM\_014301 Homo sapiens iron-sulfur cluster assembly enzyme (ISCU), mRNA NM\_014346 Homo sapiens chromosome 22 open reading frame 4 (C22orf4), mRNA

NM\_014376 Homo sapiens cytoplasmic FMR1 interacting protein 2 (CYFIP2), mRNA NM 014381 Homo sapiens mutL homolog 3 (E. coll) (MLH3), mRNA

NM\_014389 Homo sapiens proline-, glutamic acid-, leucine-rich protein 1 (PELP1), mRNA

NM 014422 Homo sapiens phosphatidylinositol (4,5) bisphosphate 5-phosphatase, A (PII NM\_014435 Homo sapiens N-acylsphingosine amidohydrolase (acid ceramidase)-like (A5

NM 014441 Homo sapiens sialic acid binding lg-like lectin 9 (SIGLEC9), mRNA

NM 014455 Homo sapiens zinc finger protein 364 (ZNF364), mRNA

NM 014460 Homo sapiens RNA-binding protein pippin (PIPPIN), mRNA NM 014472 Homo sapiens chromosome 10 open reading frame 28 (C10orf28), mRNA

NM\_014494 Homo sapiens trinucleotide repeat containing 6 (TNRC6), mRNA NM 014507 Homo sapiens malonyl-CoA:acyl carrier protein transacylase (malonyltransfe

NM\_014508 Homo sapiens apolipoprotein B mRNA editing enzyme, catalytic polypeptide-NM\_014510 Homo sapiens piccolo (presynaptic cytomatrix protein) (PCLO), transcript vai

NM\_014562 Homo sapiens orthodenticle homolog 1 (Drosophila) (OTX1), mRNA NM\_014568 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga

NM\_014572 Homo sapiens LATS, large tumor suppressor, homolog 2 (Drosophila) (LATS NM\_014573 Homo sapiens hypothetical protein MAC30 (MAC30), mRNA

NM\_014594 Homo saplens zinc finger protein 354C (ZNF354C), mRNA NM 014602 Homo sapiens phosphoinositide-3-kinase, regulatory subunit 4, p150 (PIK3R

NM 014603 Homo sapiens paraneoplastic antigen (HUMPPA), mRNA NM 014607 Homo sapiens UBX domain containing 2 (UBXD2), mRNA

NM 014608 Homo sapiens cytoplasmic FMR1 interacting protein 1 (CYFIP1), mRNA

NM 014611 Homo sapiens MDN1, midasin homolog (yeast) (MDN1), mRNA

NM 014613 Home sapiens expressed in T-cells and eosinophils in atopic dermatitis (ETE

NM\_014614 Homo sapiens proteasome (prosome, macropain) activator subunit 4 (PSME

NM\_014615 Homo sapiens KIAA0182 protein (KIAA0182), mRNA NM\_014647 Homo sapiens limkain b1 (LKAP), transcript variant 1, mRNA

NM 014655 Homo sapiens KIAA0446 gene product (KIAA0446), mRNA

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- NM\_014657 Homo sapiens KIAA0406 gene product (KIAA0406), mRNA
- NM 014667 Homo sapiens vestigial like 4 (Drosophila) (VGLL4), mRNA

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- NM 014691 Homo sapiens aquarius homolog (mouse) (AQR), mRNA
- NM\_014697 Homo sapiens C-terminal PDZ domain ligand of neuronal nitric oxide synthas NM\_014701 Homo sapiens KIAA0256 gene product (KIAA0256), mRNA
- NM 014756 Homo sapiens KIAA0097 gene product (ch-TOG), mRNA
- NM\_014798 Homo sapiens pleckstrin homology domain containing, family M (with RUN d
- NM\_014802 Homo sapiens KIAA0528 gene product (KIAA0528), mRNA
- NM\_014836 Homo sapiens Rho-related BTB domain containing 1 (RHOBTB1), transcript
- NM\_014839 Homo sapiens plasticity related gene 1 (LPPR4), mRNA
- NM 014850 Homo sapiens SLIT-ROBO Rho GTPase activating protein 2 (SRGAP2), mR NM\_014854 Homo sapiens solute carrier family 35, member E2 (SLC35E2), mRNA
- NM 014858 Homo sapiens cerebral protein 11 (HUCEP11), mRNA
- NM\_014881 Homo sapiens DNA cross-link repair 1A (PSO2 homolog, S, cerevisiae) (DCI
- NM\_014884 Homo sapiens splicing factor, arginine/serine-rich 14 (SFRS14), mRNA
- NM\_014919 Homo sapiens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript \
- NM\_014955 Homo sapiens CGI-01 protein (CGI-01), transcript variant 2, mRNA
- NM 014957 Homo sapiens KIAA0870 protein (KIAA0870), mRNA
- NM 014974 Homo saplens KIAA0934 (KIAA0934), mRNA
- NM\_014975 Homo sapiens microtubule associated serine/threonine kinase 1 (MAST1), rr
- NM\_014982 Homo sapiens pecanex homolog (Drosophila) (PCNX), mRNA NM\_014989 Homo sapiens regulating synaptic membrane exocytosis 1 (RIMS1), transcrip
- NM\_014991 Homo saplens WD repeat and FYVE domain containing 3 (WDFY3), transcri
- NM\_014992 Homo sapiens dishevelled associated activator of morphogenesis 1 (DAAM1
- NM\_014997 Homo sapiens KIAA0265 protein (KIAA0265), mRNA
- NM\_015000 Homo sapiens serine/threonine kinase 38 like (STK38L), mRNA
- NM 015004 Homo sapiens exosome component 7 (EXOSC7), mRNA
- NM 015008 Homo sapiens KIAA0779 protein (KIAA0779), mRNA
- NM\_015013 Homo sapiens amine oxidase (flavin containing) domain 2 (AOF2), mRNA
- NM\_015014 Homo saplens KIAA0117 protein (KIAA0117), mRNA
- NM\_015015 Homo sapiens jumonji domain containing 2B (JMJD2B), mRNA NM\_015017 Homo sapiens ubiquitin specific protease 33 (USP33), transcript variant 1, m
- NM\_015018 Homo sapiens KIAA1117 (KIAA1117), mRNA
- NM 015022 Homo saplens PDZ domain containing 3 (PDZK3), transcript variant 2, mRN/
- NM\_015027 Homo sapiens KIAA0251 protein (KIAA0251), mRNA
- NM\_015029 Homo sapiens processing of precursor 1, ribonuclease P/MRP subunit (S. ce
- NM\_015033 Homo sapiens formin binding protein 1 (FNBP1), mRNA
- NM\_015035 Homo saplens zinc fingers and homeoboxes 3 (ZHX3), mRNA
- NM\_015037 Homo sapiens KIAA0913 (KIAA0913), mRNA
- NM\_015039 Homo sapiens nicotinamide nucleotide adenylyltransferase 2 (NMNAT2), trai
- NM\_015040 Homo sapiens phosphatidylinositol-3-phosphate/phosphatidylinositol 5-klnas NM\_015045 Homo sapiens KIAA0261 (KIAA0261), mRNA
- NM\_015047 Homo sapiens KIAA0090 protein (KIAA0090), mRNA
- NM\_015050 Homo sapiens KIAA0082 (KIAA0082), mRNA
- NM\_015052 Homo sapiens HECT type E3 ubiquitin ligase (NEDL1), mRNA
- NM\_015055 Homo sapiens SWAP-70 protein (SWAP70), mRNA
- NM\_015059 Homo sapiens talin 2 (TLN2), mRNA
- NM\_015061 Homo sapiens jumonji domain containing 2C (JMJD2C), mRNA
- NM 015065 Homo sapiens SLAC2-B (SLAC2-B), mRNA
- NM\_015066 Homo sapiens tripartite motif-containing 35 (TRIM35), transcript variant 1, ml NM 015069 Homo sapiens zinc finger protein 423 (ZNF423), mRNA
- NM\_015076 Homo sapiens cyclin-dependent kinase (CDC2-like) 11 (CDK11), mRNA NM\_015078 Homo sapiens Rho family quanine-nucleotide exchange factor (KIAA0861), r
- NM\_015079 Homo sapiens KIAA1055 protein (KIAA1055), mRNA
- NM\_015085 Homo sapiens GTPase activating RANGAP domain-like 4 (GARNL4), mRNA
- NM\_015087 Homo sapiens spastic paraplegia 20, spartin (Troyer syndrome) (SPG20), ml
- NM\_015089 Homo sapiens p53-associated parkin-like cytoplasmic protein (PARC), mRN/

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NM 015091 Homo sapiens KIAA0423 (KIAA0423), mRNA

NM\_015094 Homo sapiens hypermethylated in cancer 2 (HIC2), mRNA

NM\_015099 Homo sapiens calmodulin binding transcription activator 2 (CAMTA2), mRNA NM\_015100 Homo sapiens pogo transposable element with ZNF domain (POGZ), transcr

NM 015102 Homo sapiens nephronophthisis 4 (NPHP4), mRNA

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NM 015103 Homo sapiens plexin D1 (PLXND1), mRNA NM\_015106 Homo sapiens KIAA0809 protein (SRISNF2L), mRNA

NM 015107 Homo sapiens PHD finger protein 8 (PHF8), mRNA

NM 015110 Homo sapiens SMC5 structural maintenance of chromosomes 5-like 1 (yeas)

NM 015115 Homo sapiens KIAA0276 protein (KIAA0276), mRNA

NM 015116 Homo sapiens leucine-rich repeats and calponin homology (CH) domain con-

NM\_015117 Homo sapiens zinc finger CCCH type domain containing 3 (ZC3HDC3), mRN NM 015120 Homo sapiens Alstrom syndrome 1 (ALMS1), mRNA

NM 015122 Homo sapiens FCH domain only 1 (FCHO1), mRNA

NM\_015134 Homo sapiens myosin phosphatase-Rho interacting protein (M-RIP), mRNA

NM 015138 Homo sapiens KIAA0252 (KIAA0252), mRNA

NM 015141 Homo sapiens glycerol-3-phosphate dehydrogenase 1-like (GPD1L), mRNA

NM\_015143 Homo sapiens methionyl aminopeptidase 1 (METAP1), mRNA

NM\_015144 Homo sapiens zinc finger, CCHC domain containing 14 (ZCCHC14), mRNA

NM\_015150 Homo sapiens raft-linking protein (RAFTLIN), mRNA

NM\_015151 Homo sapiens chromosome 21 open reading frame 106 (C21orf106), transci

NM\_015157 Homo sapiens pleckstrin homology-like domain, family B, member 1 (PHLDE

NM\_015158 Homo saplens ankyrin repeat domain 15 (ANKRD15), transcript variant 1, ml NM\_015160 Homo sapiens peptidase (mitochondrial processing) alpha (PMPCA), nuclear

NM 015161 Homo sapiens ADP-ribosylation factor-like 6 interacting protein (ARL6IP), mf

NM 015167 Homo sapiens phosphatidylserine receptor (PTDSR), mRNA

NM 015170 Homo sapiens sulfatase 1 (SULF1), mRNA

NM\_015171 Homo sapiens exportin 6 (XPO6), mRNA

NM\_015172 Homo saplens HBxAq transactivated protein 2 (XTP2), mRNA

NM\_015173 Homo sapiens TBC1 (tre-2/USP6, BUB2, cdc16) domain family, member 1 (1

NM\_015184 Homo sapiens phospholipase C-like 2 (PLCL2), mRNA

NM\_015187 Homo sapiens KIAA0746 protein (KIAA0746), mRNA

NM\_015190 Homo saplens DnaJ (Hsp40) homolog, subfamily C, member 9 (DNAJC9), m

NM\_015191 Homo sapiens salt-inducible serine/threonine kinase 2 (SIK2), mRNA

NM 015198 Homo sapiens cordon-bleu homolog (mouse) (COBL), mRNA

NM 015199 Homo saplens ankvrn repeat domain 28 (ANKRD28), mRNA

NM\_015200 Homo sapiens KIAA0648 protein (KIAA0648), mRNA

NM\_015201 Homo sapiens block of proliferation 1 (BOP1), mRNA NM\_015203 Homo sapiens KIAA0460 protein (KIAA0460), mRNA

NM 015210 Homo sapiens KIAA0802 (KIAA0802), mRNA

NM\_015213 Homo sapiens RAB6 interacting protein 1 (RAB6IP1), mRNA

NM\_015219 Homo sapiens exocyst complex component 7 (EXOC7), mRNA NM 015221 Homo saplens dynamin binding protein (DNMBP), mRNA

NM\_015229 Homo saplens KIAA0664 protein (KIAA0664), mRNA

NM 015234 Homo sapiens G protein-coupled receptor 116 (GPR116), mRNA

NM 015238 Homo sapiens KIBRA protein (KIBRA), mRNA

NM 015243 Homo sapiens Cohen syndrome 1 (COH1), transcript variant 3, mRNA

NM\_015245 Homo saplens ankyrin repeat and sterile alpha motif domain containing 1 (At

NM 015246 Homo sapiens mahogunin, ring finger 1 (MGRN1), mRNA

NM\_015250 Homo sapiens bicaudal D homolog 2 (Drosophila) (BICD2), mRNA

NM\_015252 Homo sapiens NPF/calponin-like protein (NACSIN), mRNA

NM\_015255 Homo sapiens chromosome 6 open reading frame 133 (C6orf133), mRNA

NM 015259 Homo sapiens inducible T-cell co-stimulator ligand (ICOSL), mRNA NM 015261 Homo sapiens KIAA0056 protein (KIAA0056), mRNA

NM 015263 Homo sapiens rabconnectin-3 (RC3), mRNA

NM 015265 Homo sapiens SATB family member 2 (SATB2), mRNA

NM 015266 Homo sapiens solute carrier family 9 (sodium/hydrogen exchanger), isoform

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NM 015268 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 13 (DNAJC13), NM 015274 Homo sapiens mannosidase, alpha, class 2B, member 2 (MAN2B2), mRNA NM 015275 Homo sapiens KIAA1033 protein (KIAA1033), mRNA NM 015278 Homo sapiens SAM and SH3 domain containing 1 (SASH1), mRNA NM 015281 Homo sapiens KIAA1043 protein (KIAA1043), mRNA NM 015282 Homo sapiens cytoplasmic linker associated protein 1 (CLASP1), mRNA NM 015284 Homo sapiens KIAA0467 protein (KIAA0467), mRNA NM\_015286 Homo sapiens desmuslin (DMN), transcript variant B, mRNA NM\_015289 Homo sapiens vacuolar protein sorting 39 (yeast) (VPS39), mRNA NM\_015293 Homo sapiens spectrin repeat containing, nuclear envelope 1 (SYNE1), trans NM\_015296 Homo sapiens dedicator of cytokinesis 9 (DOCK9), mRNA NM\_015305 Homo sapiens KIAA0759 (KIAA0759), mRNA NM\_015308 Homo sapiens formin binding protein 4 (FNBP4), mRNA NM\_015315 Homo sapiens likely ortholog of mouse la related protein (LARP), mRNA NM 015316 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 13B (PPF NM 015319 Homo sapiens tensin like C1 domain containing phosphatase (TENC1), trans NM 015321 Homo saplens mucoepidermoid carcinoma translocated 1 (MECT1), mRNA NM\_015323 Homo sapiens KIAA0776 (KIAA0776), mRNA NM 015327 Homo sapiens Est1p-like protein B (EST1B), mRNA NM 015328 Homo sapiens KIAA0828 protein (KIAA0828), mRNA NM 015329 Homo sapiens KIAA0892 (KIAA0892), mRNA NM 015330 Homo sapiens KIAA0376 protein (KIAA0376), mRNA NM 015331 Homo sapiens nicastrin (NCSTN), mRNA NM\_015335 Homo sapiens thyroid hormone receptor associated protein 2 (THRAP2), mF NM 015336 Homo sapiens zinc finger, DHHC domain containing 17 (ZDHHC17), mRNA NM 015338 Homo sapiens additional sex combs like 1 (Drosophila) (ASXL1), mRNA NM 015341 Homo sapiens barren homolog (Drosophila) (BRRN1), mRNA NM\_015342 Homo saplens KIAA0073 protein (KIAA0073), mRNA NM\_015345 Homo sapiens dishevelled associated activator of morphogenesis 2 (DAAM2 NM\_015346 Homo sapiens zinc finger, FYVE domain containing 26 (ZFYVE26), mRNA NM 015347 Homo sapiens RIM blnding protein 2 (KIAA0318), mRNA NM\_015350 Homo saplens T-cell activation leucine repeat-rich protein (TA-LRRP), mRNA NM\_015352 Homo sapiens protein O-fucosyltransferase 1 (POFUT1), transcript variant 1, NM\_015358 Homo sapiens zinc finger, CW-type with colled-coll domain 3 (ZCWCC3), mf NM 015359 Homo sapiens solute carrier family 39 (zinc transporter), member 14 (SLC39 NM\_015360 Homo saplens KIAA0052 (KIAA0052), mRNA NM\_015374 Homo sapiens unc-84 homolog B (C. elegans) (UNC84B), mRNA NM\_015375 Homo sapiens receptor interacting protein kinase 5 (RIPK5), transcript variar NM\_015378 Homo sapiens vacuolar protein sorting 13D (yeast) (VPS13D), mRNA NM 015381 Homo sapiens TAFA protein 5 (TAFA5), mRNA NM\_015382 Homo saplens HECT domain containing 1 (HECTD1), mRNA NM\_015386 Homo sapiens component of oligomeric golgi complex 4 (COG4), mRNA NM 015391 Homo sapiens anaphase promoting complex subunit 13 (ANAPC13), mRNA NM\_015395 Homo sapiens DKFZP434B0335 protein (DKFZP434B0335), mRNA NM 015397 Homo sapiens WD repeat domain 40A (WDR40A), mRNA NM 015404 Homo sapiens deafness, autosomal recessive 31 (DFNB31), mRNA

NM\_015411 Homo sapiens sulfatase modifying factor 2 (SUMF2), mRNA NM\_015412 Homo sapiens DKFZP434F2021 protein (DKFZP434F2021), mRNA

NM\_015430 Homo sapiens regeneration associated muscle protease (DKFZP586H2123) NM 015431 Homo sapiens BIA2 (BIA2), mRNA

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NM\_015433 Homo saplens hepatocellularcarcinoma-associated antigen HCA557a (DKFZ NM\_015436 Homo sapiens ring finger and CHY zinc finger domain containing 1 (RCHY1)

NM\_015439 Homo sapiens chromosome 6 open reading frame 80 (C6orf80), mRNA NM\_015440 Homo sapiens formyltetrahydrofolate synthetase domain containing 1 (FTHF

NM 015441 Homo saplens olfactomedin-like 2B (OLFML2B), mRNA

NM 015443 Homo sapiens hypothetical protein LOC284058 (LOC284058), mRNA

NM 015444 Homo sapiens Ras-induced senescence 1 (RIS1), mRNA

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- NM\_015446 Homo sapiens ELYS transcription factor-like protein TMBS62 (ELYS), mRNA NM\_015447 Homo sapiens calmodulin regulated spectrin-associated protein 1 (CAMSAP Homo sapiens deleted in a mouse model of primary ciliary dyskinesia (DPCC NM\_015457 Homo sapiens zinc finger, DHHC domain containing 5 (ZDHHCS), mRNA NM\_015459 Homo sapiens DKFZP5640883 protein (DKFZP5640883), mRNA Homo sapiens DKFZP5640883 protein (DKFZP5640883), mRNA
- NM\_015461 Homo sapiens zinc finger protein 521 (ZNF521), mRNA NM\_015463 Homo sapiens chromosome 2 open reading frame 32 (C2orf32), mRNA
- NM\_015464 Homo sapiens sclerostin domain containing 1 (SOSTDC1), mRNA
- NM\_015465 Homo sapiens gem (nuclear organelle) associated protein 5 (GEMIN5), mRN. NM\_015466 Homo sapiens protein tyrosine phosphatase, non-receptor type 23 (PTPN23), NM\_015469 Homo sapiens nipsnap homolog 3A (C. Legans) (NIPSNAP3A), mRNA
- NM\_015470 Homo sapiens RAB11 family interacting protein 5 (class t) (RAB11FIP5), mR NM\_015475 Homo sapiens DKFZP564F0522 protein (DKFZP564F0522), mRNA
- NM\_015476 Homo sapiens chromosome 18 open reading frame 10 (C18orf10), mRNA NM\_015477 Homo sapiens SIN3 homolog A, transcriptional regulator (yeast) (SIN3A), mF NM\_015481 Homo sapiens zinc finger protein 385 (ZNP385), mRNA
- NM\_015483 Homo sapiens kelch repeat and BTB (POZ) domain containing 2 (KBTBD2),
- NM\_015488 Homo sapiens myofibrillogenesis regulator 1 (MR-1), mRNA
- NM\_015503 Homo saplens SH2-B homolog (SH2B), mRNA
  NM\_015508 Homo saplens TCDD-Inducible poly(ADP-ribose) polymerase (TIPARP), mRI

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- NM\_015518 Homo sapiens DKFZP434C131 protein (DKFZP434C131), mRNA
- NM\_015522 Homo sapiens dynein 2 light intermediate chain (D2LIC), transcript variant 2, NM\_015529 Homo sapiens monooxygenase, DBH-like 1 (MOXD1), mRNA
- NM\_015531 Homo saplens DKFZP586P0123 protein (DKFZP586P0123), mRNA NM\_015532 Homo saplens glutamate receptor, ionotropic, N-methyl D-aspartate-like 1A (
- NM\_015534 Homo sapiens zinc finger, ZZ domain containing 3 (ZZZ3), mRNA
- NM\_015541 Homo sapiens leucine-nch repeats and Immunoglobulin-like domains 1 (LRI( NM\_015547 Homo sapiens thioesterase, adipose associated (THEA), transcript variant 1,
- NM\_015548 Homo sapiens dystonin (DST), transcript variant 1eA, mRNA NM\_015553 Homo sapiens phosphoinositide-binding protein PIP3-E (PIP3-E), mRNA
- NM\_015555 Homo sapiens zinc finger protein 451 (ZNF451), mRNA
- NM\_015557 Homo sapiens chromodomain helicase DNA binding protein 5 (CHD5), mRN. NM\_015558 Homo sapiens synovial sarcoma translocation gene on chromosome 18-like
- NM\_015560 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_015565 Homo sapiens zinc finger protein 294 (ZNF294), mRNA
- NM\_015567 Homo sapiens SLIT and NTRK-like family, member 5 (SLITRK5), mRNA
- NM\_015568 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 16B (PPF NM\_015569 Homo sapiens dynamin 3 (DNM3), mRNA
- NM\_015575 Homo sapiens trinucleotide repeat containing 15 (TNRC15), mRNA
  NM\_015576 Homo sapiens CAZ-associated structural protein (CAST), mRNA
- NM\_015576 Homo sapiens CAZ-associated structural protein (CAST), mRNA NM\_015578 Homo sapiens chromosome 19 open reading frame 13 (C19orf13), mRNA
- NM\_015585 Homo sapiens chromosome 20 open reading frame 26 (C20orf26), mRNA NM\_015589 Homo sapiens sterile alpha motif domain containing 4 (SAMD4), mRNA
- NM\_015589 Homo sapiens sterile alpha motif domain containing 4 (SAMD4), mRNA NM\_015597 Homo sapiens G-protein signalling modulator 1 (AGS3-like, C. elegans) (GPI
- NM\_015600 Homo sapiens chromosome 20 open reading frame 22 (C20orf22), mRNA
- NM\_015602 Homo sapiens lamina-associated polypeptide 1B (LAP1B), mRNA NM\_015604 Homo sapiens WD repeat domain 21 (WDR21), transcript variant 1, mRNA
- NM\_015605 Homo sapiens DKFZP566K0524 protein (DKFZP566K0524), mRNA NM\_015608 Homo sapiens chromosome 10 open reading frame 137 (C10orf137), mRNA
- NM\_015609 Homo sapiens putative MAPK activating protein PM20,PM21 (DKFZp566C04
- NM\_015617 Homo sapiens pygopus 1 (PYGO1), mRNA
- NM\_015627 Homo sapiens LDL receptor adaptor protein (ARH), mRNA
- NM\_015631 Homo sapiens chromosome 10 open reading frame 61 (C10orf61), mRNA
  NM 015633 Homo sapiens FGFR1 oncogene partner 2 (FGFR10P2), mRNA
- NM 015634 Homo sapiens KIAA1279 (KIAA1279), mRNA
- NM 015635 Homo sapiens DKFZP434C212 protein (DKFZP434C212), mRNA

NM 015639 Homo sapiens GTPase activating RANGAP domain-like 2 pseudogene (GAF NM 015649 Homo sapiens interferon regulatory factor 2 binding protein 1 (IRF2BP1), mR NM 015655 Homo sapiens zinc finger protein 337 (ZNF337), mRNA NM 015659 Homo sapiens DKFZP564M182 protein (DKFZP564M182), mRNA NM 015660 Homo sapiens immunity associated protein 2 (HIMAP2), mRNA NM 015662 Homo sapiens selective LIM binding factor, rat homolog (SLB), mRNA NM 015666 Homo sapiens GTP binding protein 5 (putative) (GTPBP5), mRNA NM 015667 Homo sapiens chromosome 9 open reading frame 36 (C9orf36), mRNA NM 015668 Homo sapiens DKFZP434I092 protein (DKFZP434I092), mRNA NM 015687 Homo sapiens filamin A interacting protein 1 (FILIP1), mRNA NM\_015690 Homo sapiens serine/threonine kinase 36 (fused homolog, Drosophila) (STK NM 015691 Homo sapiens KIAA1280 protein (KIAA1280), mRNA NM\_015692 Homo sapiens C3 and PZP-like, alpha-2-macroglobulin domain containing 8 NM 015693 Homo sapiens PDZ domain containing 6 (PDZK6), mRNA NM\_015694 Homo sapiens KIAA1285 protein (KIAA1285), mRNA NM\_015713 Homo sapiens ribonucleotide reductase M2 B (TP53 inducible) (RRM2B), mF NM 015723 Homo sapiens intracellular membrane-associated calcium-independent phos NM 015905 Homo sapiens transcriptional intermediary factor 1 (TIF1), transcript variant 1 NM 015979 Home sapiens cofactor required for Sp1 transcriptional activation, subunit 3, NM 016105 Homo sapiens FK506 binding protein 7 (FKBP7), transcript variant 1, mRNA NM 016133 Homo sapiens insulin induced gene 2 (INSIG2), mRNA NM 016320 Homo sapiens nucleoporin 98kDa (NUP98), transcript variant 1, mRNA NM 016544 Homo sapiens Ras-associated protein Rap1 (RBJ), mRNA NM\_017419 Homo sapiens amiloride-sensitive cation channel 5, intestinal (ACCN5), mRN NM\_017437 Homo sapiens cleavage and polyadenylation specific factor 2, 100kDa (CPSI NM\_017440 Homo sapiens nuclear protein double minute 1 (MDM1), mRNA NM 017510 Homo saplens gp25L2 protein (HSGP25L2G), mRNA NM\_017516 Homo sapiens RAB39, member RAS oncogene family (RAB39), mRNA NM\_017519 Homo sapiens AT rich interactive domain 1B (SWI1-like) (ARID1B), transcrip NM 017520 Homo sapiens M-phase phosphoprotein, mpp8 (HSMPP8), mRNA NM\_017525 Homo saplens myotonic dystrophy protein kinase like protein (HSMDPKIN), t NM\_017527 Homo sapiens cDNA for differentially expressed CO16 gene (LY6K), mRNA NM\_017539 Homo sapiens dynein, axonemal, heavy polypeptide 3 (DNAH3), mRNA NM 017549 Homo sapiens upregulated in colorectal cancer gene 1 (UCC1), mRNA NM 017550 Homo sapiens KIAA1193 (KIAA1193), mRNA NM\_017553 Homo sapiens homolog of yeast INO80 (INO80), transcript variant 1, mRNA NM 017554 Homo sapiens KIAA1268 protein (KIAA1268), mRNA NM\_017556 Homo sapiens filamin-binding LIM protein-1 (FBLP-1), mRNA NM 017563 Homo saplens Interleukin 17 receptor D (IL17RD), mRNA NM\_017565 Homo sapiens family with sequence similarity 20, member A (FAM20A), mRI NM 017570 Homo sapiens 5-oxoprolinase (ATP-hydrolysing) (OPLAH), mRNA NM 017573 Homo sapiens proprotein convertase subtilisin/kexin type 4 (PCSK4), mRNA NM\_017576 Homo saplens kinesin family member 27 (KIF27), mRNA NM\_017580 Homo sapiens zinc finger, RAN-binding domain containing 1 (ZRANB1), mRI NM\_017602 Homo sapiens hypothetical protein DKFZp761A052 (DKFZp761A052), mRN/ NM\_017619 Homo sapiens U11/U12 snRNP 65K protein (FLJ25070), mRNA NM\_017628 Homo sapiens hypothetical protein FLJ20032 (FLJ20032), mRNA NM 017641 Homo sapiens kinesin family member 21A (KIF21A), mRNA NM 017666 Homo sapiens suppressor of hairy wing homolog 3 (Drosophila) (SUHW3), n NM 017672 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM 017725 Homo sapiens hypothetical protein FLJ20249 (FLJ20249), transcript variant : NM 017747 Homo sapiens ankyrin repeat and KH domain containing 1 (ANKHD1), transc NM\_017754 Homo sapiens chromosome 6 open reading frame 107 (C6orf107), mRNA

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NM\_017871 Homo sapiens hypothetical protein FLJ20542 (FLJ20542), mRNA NM\_017879 Homo sapiens hypothetical protein FLJ20557 (FLJ20557), mRNA NM\_017969 Homo sapiens hypothetical protein FLJ10006 (FLJ10006), mRNA NM 017978 Homo sapiens ankynn repeat and KH domain containing 1 (ANKHD1), transc NM\_018003 Homo sapiens uveal autoantigen with coiled-coil domains and ankyrin repeal NM 018069 Homo sapiens hypothetical protein FLJ10352 (FLJ10352), transcript variant; NM\_018117 Homo sapiens WD repeat domain 11 (WDR11), mRNA NM\_018151 Homo sapiens telomere-associated protein RIF1 homolog (Rif1), mRNA NM\_018177 Homo sapiens Nedd4 binding protein 2 (N4BP2), mRNA NM\_018193 Homo sapiens hypothetical protein FLJ10719 (FLJ10719), mRNA NM\_018218 Homo sapiens ubiquitin specific protease 40 (USP40), mRNA NM\_018237 Homo sapiens cell division cycle and apoptosis regulator 1 (CCAR1), mRNA NM 018284 Homo sapiens guanylate binding protein 3 (GBP3), mRNA NM 018325 Homo sapiens chromosome 9 open reading frame 72 (C9orf72), transcript va NM 018334 Homo sapiens leucine rich repeat neuronal 3 (LRRN3), mRNA NM 018369 Homo saplens DEP domain containing 1B (DEPDC1B), mRNA NM 018392 Homo sapiens hypothetical protein FLJ11331 (FLJ11331), mRNA NM\_018397 Homo saplens choline dehydrogenase (CHDH), mRNA NM\_018405 Homo sapiens hypothetical protein, clone 2746033 (HSA272196), mRNA NM\_018414 Homo sapiens sialyttransferase 7 ((alpha-N-acetylneuraminyl-2,3-beta-galaci NM\_018420 Homo sapiens solute camer family 22 (organic cation transporter), member 1 NM\_018424 Homo sapiens erythrocyte membrane protein band 4.1 like 4B (EPB41L4B), NM\_018429 Homo sapiens B double prime 1, subunit of RNA polymerase III transcription NM 018462 Homo sapiens chromosome 3 open reading frame 10 (C3orf10), mRNA NM\_018646 Homo sapiens transient receptor potential cation channel, subfamily V, mem NM 018689 Homo sapiens KIAA1199 (KIAA1199), mRNA NM\_018703 Homo saplens retinoblastoma binding protein 6 (RBBP6), transcript variant 2 NM 018704 Homo sapiens hypothetical protein DKFZp547A023 (DKFZp547A023), mRN/ NM\_018708 Homo sapiens fem-1 homolog a (C.elegans) (FEM1A), mRNA NM\_018710 Homo sapiens hypothetical protein DKFZp762O076 (DKFZp762O076), mRN NM\_018711 Homo saplens hypothetical protein DKFZp761H039 (DKFZp761H039), mRN NM\_018712 Homo sapiens hypothetical protein DKFZp547C176 (DKFZp547C176), mRN. NM 018714 Homo sapiens component of oligomeric golgi complex 1 (COG1), mRNA NM\_018715 Homo sapiens RCC1-like (TD-60), mRNA NM\_018717 Homo saplens mastermind-like 3 (Drosophila) (MAML3), mRNA NM 018837 Homo sapiens sulfatase 2 (SULF2), transcript variant 1, mRNA NM\_018847 Homo sapiens kelch-like 9 (Drosophila) (KLHL9), mRNA NM 018981 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 10 (DNAJC10), NM\_018987 Homo saptens sema domain, seven thrombospondin repeats (type 1 and typ NM\_018998 Homo saplens F-box and WD-40 domain protein 5 (FBXW5), transcript varia NM\_018999 Homo sapiens KIAA1128 protein (KIAA1128), mRNA NM\_019001 Homo sapiens 5'-3' exoribonuclease 1 (XRN1), mRNA NM\_019007 Homo saplens hypothetical protein FLJ20811 (FLJ20811), mRNA NM\_019010 Homo sapiens keratin 20 (KRT20), mRNA NM\_019015 Homo sapiens chondroitin sulfate glucuronyltransferase (CSGlcA-T), mRNA NM 019022 Homo saplens FLJ20793 protein (FLJ20793), mRNA NM 019026 Homo sapiens putative membrane protein (LOC54499), mRNA NM 019029 Homo sapiens carboxypeptidase, vitellogenic-like (CPVL), transcript variant 2 NM\_019030 Homo sapiens DEAH (Asp-Glu-Ala-His) box polypeptide 29 (DHX29), mRNA NM\_019032 Homo sapiens thrombospondin repeat containing 1 (TSRC1), mRNA NM\_019036 Homo sapiens 3-hydroxymethyl-3-methylglutaryl-Coenzyme A lyase-like 1 (H NM\_019051 Homo sapiens mitochondrial ribosomal protein L50 (MRPL50), nuclear gene NM\_019053 Homo sapiens SEC15-like 1 (S. cerevisiae) (SEC15L1), mRNA NM\_019055 Homo sapiens roundabout homolog 4, magic roundabout (Drosophila) (ROB

NM\_019065 Homo sapiens EF hand calcium binding protein 2 (EFCBP2), mRNA NM\_019072 Homo sapiens small glutamine-rich tetratricopeptide repeat (TPR)-containing NM\_019075 Homo sapiens UDP glycosyltransferase 1 family, polype

NM 019077 Homo sapiens UDP glycosyltransferase 1 family, polypeptide A7 (UGT1A7), NM\_019078 Homo sapiens UDP glycosyltransferase 1 family, polypeptide A5 (UGT1A5), NM 019085 Homo sapiens F-box and leucine-rich repeat protein 19 (FBXL19), mRNA NM 019092 Homo sapiens hypothetical protein KIAA1164 (KIAA1164), mRNA NM 019104 Homo sapiens protein F25965 (F25965), mRNA NM 019107 Homo sapiens chromosome 19 open reading frame 10 (C19orf10), mRNA NM 019590 Homo sapiens KIAA1217 (KIAA1217), mRNA NM 019593 Homo sapiens hypothetical protein KIAA1434 (KIAA1434), mRNA NM 019594 Homo sapiens leucine rich repeat containing 8 (LRRC8), mRNA NM 019850 Homo sapiens neuronal guanine nucleotide exchange factor (NGEF), mRNA NM 020063 Homo sapiens BarH-like 2 (Drosophila) (BARHL2), mRNA NM 020116 Homo sapiens follistatin-like 5 (FSTL5), mRNA NM\_020124 Homo sapiens interferon, kappa (IFNK), mRNA NM 020170 Homo sapiens nicalin (LOC56926), mRNA NM 020172 Homo sapiens SPPL2b (SPPL2B), mRNA NM\_020175 Homo saplens hypothetical protein from EUROIMAGE 1967720 (LOC56931) NM\_020192 Homo sapiens chromosome 7 open reading frame 36 (C7orf36), mRNA NM\_020204 Homo sapiens LIM homeobox 9 (LHX9), mRNA NM\_020207 Homo sapiens chromosome 9 open reading frame 102 (C9orf102), mRNA NM 020209 Homo sapiens src homology 2 domain-containing transforming protein D (SF NM\_020210 Homo sapiens sema domain, immunoglobulin domain (lg), transmembrane c NM\_020211 Homo sapiens RGM domain family, member A (RGMA), mRNA NM 020212 Homo sapiens hypothetical protein from EUROIMAGE 384293 (LOC56964). NM 020214 Homo sapiens hypothetical protein from EUROIMAGE 1977056 (LOC56965) NM 020219 Homo sapiens carcinoembryonic antigen-like 1 (CEAL1), mRNA NM\_020223 Homo sapiens family with sequence similarity 20, member C (FAM20C), mRI NM\_020311 Homo saplens chemokine orphan receptor 1 (CMKOR1), mRNA NM\_020312 Homo saplens hypothetical protein DKFZp434K046 (DKFZP434K046), mRN. NM\_020318 Homo saplens pappalysin 2 (PAPPA2), transcript variant 1, mRNA NM\_020319 Homo sapiens ankyrin repeat and MYND domain containing 2 (ANKMY2), ml NM\_020320 Homo saplens arginyl-tRNA synthetase-like (RARSL), mRNA NM\_020336 Homo sapiens KIAA1219 protein (KIAA1219), mRNA NM 020338 Homo sapiens retinoic acid induced 17 (RAI17), mRNA NM 020340 Homo sapiens KIAA1244 (KIAA1244), mRNA NM\_020341 Homo saplens p21(CDKN1A)-activated kinase 7 (PAK7), transcript variant 1. NM\_020376 Homo sapiens transport-secretion protein 2.2 (TTS-2.2), mRNA NM\_020378 Homo sapiens K562 cell-derived leucine-zipper-like protein 1 (KLP1), mRNA NM\_020383 Homo sapiens X-prolyl aminopeptidase (aminopeptidase P) 1, soluble (XPNF NM\_020409 Homo saplens mitochondrial ribosomal protein L47 (MRPL47), nuclear gene NM\_020416 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM\_020417 Homo sapiens T-box 20 (TBX20), mRNA NM\_020420 Homo sapiens deleted in azoospermia 4 (DAZ4), mRNA NM\_020429 Homo saplens SMAD specific E3 ublquitin protein ligase 1 (SMURF1), transc NM\_020432 Homo sapiens putative homeodomain transcription factor 2 (PHTF2), mRNA NM 020438 Homo sapiens dolichyl pyrophosphate phosphatase 1 (DOLPP1), mRNA NM 020440 Homo saplens prostaglandin F2 receptor negative regulator (PTGFRN), mRN NM 020447 Homo sapiens chromosome 15 open reading frame 17 (C15orf17), mRNA NM\_020451 Homo sapiens selenoprotein N, 1 (SEPN1), transcript variant 1, mRNA NM 020452 Homo sapiens ATPase, Class I, type 8B, member 2 (ATP8B2), mRNA NM\_020453 Homo sapiens ATPase, Class V, type 10D (ATP10D), mRNA NM\_020455 Homo sapiens G protein-coupled receptor 126 (GPR126), mRNA NM 020456 Homo sapiens chromosome 13 open reading frame 1 (C13orf1), mRNA NM\_020457 Homo sapiens THAP domain containing 11 (THAP11), mRNA NM 020462 Homo sapiens KIAA1181 protein (KIAA1181), mRNA NM 020463 Homo sapiens KIAA1387 protein (KIAA1387), mRNA

NM\_020468 Homo sapiens sorting nexin 14 (SNX14), transcript variant 2, mRNA NM\_020531 Homo sapiens chromosome 20 open reading frame 3 (C20orf3), mRNA

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- NM\_020532 Homo saplens reticulon 4 (RTN4), transcript variant 1, mRNA
- NM\_020536 Homo sapiens CSRP2 binding protein (CSRP2BP), transcript variant 1, mRN
- NM 020546 Homo sapiens adenylate cyclase 2 (brain) (ADCY2), mRNA
- NM 020631 Homo sapiens putative NFkB activating protein (KIAA0720), transcript varian
- NM 020647 Homo sapiens junctophilin 1 (JPH1), mRNA
- NM 020693 Homo sapiens Down syndrome cell adhesion molecule like 1 (DSCAML1), m
- NM\_020695 Homo sapiens transcription elongation factor B polypeptide 3 binding protein
- NM\_020696 Homo sapiens KIAA1143 protein (KIAA1143), mRNA
- NM\_020697 Homo sapiens potassium voltage-gated channel, delayed-rectifier, subfamily NM\_020698 Homo sapiens KIAA1145 protein (KIAA1145), mRNA
- NM\_020699 Homo sapiens transcription repressor p66 beta component of the MeCP1 cor NM\_020701 Homo sapiens KIAA1160 protein (KIAA1160), mRNA

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- NM\_020702 Homo sapiens KIAA1161 (KIAA1161), mRNA
- NM\_020706 Homo sapiens splicing factor, arginine/serine-rich 15 (SFRS15), mRNA
- NM\_020710 Homo sapiens KIAA1185 protein (KIAA1185), mRNA
- NM\_020713 Homo sapiens KIAA1196 protein (KIAA1196), mRNA
- NM 020714 Homo sapiens zinc finger protein 490 (ZNF490), mRNA NM\_020718 Homo sapiens ubiquitin specific protease 31 (USP31), mRNA
- NM\_020728 Homo sapiens KIAA1228 protein (KIAA1228), mRNA
- NM\_020732 Homo saplens AT rich interactive domain 1B (SWI1-like) (ARID1B), transcrip
- NM\_020739 Homo sapiens cell cycle progression 1 (CCPG1), mRNA NM\_020740 Homo sapiens ankyrin repeat and FYVE domain containing 1 (ANKFY1), trar
- NM\_020742 Homo sapiens neuroligin 4, X-linked (NLGN4X), transcript variant 1, mRNA
- NM\_020744 Homo saplens metastasis associated family, member 3 (MTA3), mRNA
- NM\_020745 Homo sapiens alanyl-tRNA synthetase like (AARSL), mRNA
- NM\_020746 Homo sapiens KIAA1271 protein (KIAA1271), mRNA
- NM 020748 Homo sapiens KIAA1287 protein (KIAA1287), mRNA
- NM 020750 Homo sapiens exportin 5 (XPO5), mRNA
- NM 020751 Homo sapiens component of oligomeric golgi complex 6 (COG6), mRNA
- NM\_020752 Homo saplens G protein-coupled receptor 158 (GPR158), mRNA
- NM\_020753 Homo sapiens CASK Interacting protein 2 (CASKIN2), mRNA
- NM\_020755 Homo saplens tumor differentially expressed 2 (TDE2), mRNA
- NM\_020761 Homo sapiens raptor (raptor), mRNA
- NM\_020762 Homo saplens SLIT-ROBO Rho GTPase activating protein 1 (SRGAP1), mR
- NM\_020765 Homo sapiens retinoblastoma-associated factor 600 (RBAF600), mRNA
- NM\_020769 Homo saplens KIAA1318 protein (KIAA1318), mRNA
- NM 020771 Homo sapiens HECT domain and ankyrin repeat containing, E3 ubiquitin pro NM\_020772 Homo saplens 82-kD FMRP Interacting Protein (182-FIP), mRNA
- NM 020773 Homo sapiens TBC1 domain family, member 14 (TBC1D14), mRNA
- NM 020774 Homo sapiens mindbomb homolog 1 (Drosophila) (MIB1), mRNA
- NM\_020775 Homo sapiens maba1 (KIAA1324), mRNA
- NM\_020778 Homo sapiens likely ortholog of mouse myocytic induction/differentiation original
- NM\_020779 Homo sapiens WD repeat domain 35 (WDR35), mRNA
- NM\_020781 Homo sapiens zinc finger protein 398 (ZNF398), transcript variant 2, mRNA
- NM\_020783 Homo sapiens synaptotegmin IV (SYT4), mRNA
- NM 020786 Homo sapiens pyruvate dehydrogenase phosphatase Isoenzyme 2 (PDP2), I
- NM 020787 Homo sapiens zinc finger protein 624 (ZNF624), mRNA
- NM 020789 Homo sapiens immunoglobulin superfamily, member 9 (IGSF9), mRNA
- NM 020791 Homo sapiens serine/threonine protein kinase TAO1 homolog (KIAA1361), n
- NM\_020792 Homo sapiens KIAA1363 protein (KIAA1363), mRNA
- NM\_020795 Homo sapiens neuroligin 2 (NLGN2), mRNA
- NM\_020799 Homo sapiens associated molecule with the SH3 domain of STAM (AMSH) li
- NM\_020800 Homo sapiens KIAA1374 protein (KIAA1374), mRNA
- NM\_020801 Homo sapiens arrestin domain containing 3 (ARRDC3), mRNA
- NM\_020803 Homo sapiens kelch-like 8 (Drosophila) (KLHL8), mRNA
- NM\_020804 Homo sapiens protein kinase C and casein kinase substrate in neurons 1 (P)
- NM\_020808 Homo sapiens signal-induced proliferation-associated 1 like 2 (SIPA1L2), mF

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NM 020809 Homo sapiens Rho GTPase activating protein 20 (ARHGAP20), mRNA NM 020810 Homo sapiens KIAA1393 (KIAA1393), mRNA NM 020812 Homo sapiens dedicator of cytokinesis 6 (DOCK6), mRNA NM 020813 Homo sapiens zinc finger protein 471 (ZNF471), mRNA NM 020816 Homo sapiens kinesin family member 17 (KIF17), mRNA NM 020817 Homo sapiens KIAA1407 protein (KIAA1407), mRNA NM 020818 Homo sapiens KIAA1409 (KIAA1409), mRNA NM 020820 Homo sapiens phosphatidylinositol 3,4,5-trisphosphate-dependent RAC exch NM\_020824 Homo sapiens Rho GTPase activating protein 21 (ARHGAP21), mRNA NM 020825 Homo sapiens Crm, cramped-like (Drosophila) (CRAMP1L), mRNA NM 020826 Homo sapiens synaptotagmin XIII (SYT13), mRNA NM\_020828 Homo sapiens zinc finger protein 28 homolog (mouse) (ZFP28), mRNA NM 020832 Homo sapiens KIAA1441 protein (KIAA1441), mRNA NM 020834 Homo sapiens KIAA1443 (KIAA1443), mRNA NM 020839 Homo sapiens WD repeat endosomal protein (KIAA1449), mRNA NM 020844 Homo sapiens KIAA1456 protein (KIAA1456), mRNA NM 020845 Homo sapiens phosphatidylinositol transfer protein, membrane-associated 2 NM\_020847 Homo saplens trinucleotide repeat containing 6 (TNRC6), mRNA NM\_020850 Homo sapiens Ran-binding protein 10 (RANBP10), mRNA NM 020851 Homo sapiens KIAA1465 protein (KIAA1465), mRNA NM 020854 Homo sapiens KIAA1468 (KIAA1468), mRNA NM 020856 Homo saplens zinc finger protein 537 (ZNF537), mRNA NM 020858 Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic NM\_020859 Homo sapiens Shroom-related protein (ShrmL), mRNA NM 020860 Homo saplens stromal interaction molecule 2 (STIM2), mRNA NM 020861 Homo sapiens zinc finger and BTB domain containing 2 (ZBTB2), mRNA NM 020863 Homo sapiens zinc finger protein 406 (ZNF406), mRNA NM 020867 Homo sapiens ubiquitin associated protein 2 (UBAP2), transcript variant 2, m NM 020868 Homo saplens dipeptidylpeptidase 10 (DPP10), mRNA NM 020870 Homo sapiens SH3 multiple domains 2 (SH3MD2), mRNA NM 020871 Homo sapiens leucine-rich repeats and calponin homology (CH) domain con-NM 020873 Homo sapiens leucine rich repeat neuronal 1 (LRRN1), mRNA NM 020875 Homo sapiens Fraser syndrome 1 (FRAS1), transcript variant 3, mRNA NM\_020880 Homo sapiens zinc finger protein 530 (ZNF530), mRNA NM 020882 Homo sapiens KIAA1510 protein (KIAA1510), mRNA NM 020889 Homo sapiens PHD finger protein 12 (PHF12), mRNA NM 020890 Homo saplens KIAA1524 protein (KIAA1524), mRNA NM\_020892 Homo sapiens deltex homolog 2 (Drosophila) (DTX2), mRNA NM\_020895 Homo sapiens KIAA1533 (KIAA1533), mRNA NM\_020897 Homo sapiens hyperpolarization activated cyclic nucleotide-gated potassium NM 020899 Home saplens zinc finger and BTB domain containing 4 (ZBTB4), mRNA NM 020914 Homo sapiens chromosome 17 open reading frame 27 (C17orf27), mRNA NM 020918 Homo sapiens glycerol-3-phosphate acyltransferase, mitochondrial (GPAM),

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NM\_020922 Homo sapiens protein kinase, lysine deficient 3 (PRKWNK3), transcript varia NM\_020925 Homo sapiens KIAA1573 protein (KIAA1573), mRNA NM\_020926 Homo sapiens BCL6 co-repressor (BCOR), transcript variant 2, mRNA

NM\_020927 Homo sapiens KIAA1576 protein (KIAA1576), mRNA NM\_020932 Homo sapiens melanoma antigen, family E, 1 (MAGEE1), mRNA NM\_020935 Homo sapiens ubiquitin specific protease 37 (USP37), mRNA

NM\_020936 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 55 (DDX55), mRN/-NM\_020939 Homo sapiens copine V (CPNE5), mRNA

NM\_020939 Homo sapiens copine v (CPNE5), mRNA
NM\_020944 Homo sapiens glucosidase, beta (bile acid) 2 (GBA2), mRNA

NM\_020944 Homo sapiens glucosidase, beta (bile acid) 2 (GBA2), mRNA NM\_020947 Homo sapiens KIAA1609 protein (KIAA1609), mRNA

NM\_020948 Homo sapiens mesoderm induction early response 1 (MI-ER1), mRNA

NM\_020951 Homo sapiens zinc finger protein 529 (ZNF529), mRNA

NM\_020952 Homo sapiens translent receptor potential cation channel, subfamily M, mem NM\_020954 Homo sapiens KIAA1618 (KIAA1618), mRNA

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NM 020961 Homo sapiens KIAA1627 protein (KIAA1627), mRNA

NM\_020962 Homo sapiens likely ortholog of mouse neighbor of Punc E11 (NOPE), mRN/ NM 020964 Homo sapiens KIAA1632 protein (KIAA1632), mRNA

NM 020965 Homo sapiens membrane-associated guanylate kinase-related (MAGI-3) (M/

NM\_020970 Homo sapiens KIAA1641 (KIAA1641), mRNA

NM 020971 Homo sapiens spectrin, beta, non-erythrocytic 4 (SPTBN4), mRNA

NM 021006 Homo sapiens chemokine (C-C motif) ligand 3-like 1 (CCL3L1), mRNA NM\_021009 Homo sapiens ubiquitin C (UBC), mRNA

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NM\_021035 Homo sapiens KIAA1404 protein (KIAA1404), mRNA

NM\_021044 Homo sapiens desert hedgehog homolog (Drosophila) (DHH), mRNA

NM\_021045 Homo sapiens zinc finger protein 248 (ZNF248), mRNA

NM 021059 Homo sapiens histone 2, H3c (HIST2H3C), mRNA

NM 021061 Homo sapiens zinc finger protein 647 (ZNF647), mRNA

NM 021072 Homo sapiens hyperpolarization activated cyclic nucleotide-gated potassium NM 021088 Homo sapiens zinc finger protein 2 (A1-5) (ZNF2), mRNA

NM 021089 Homo sapiens zinc finger protein 8 (clone HF.18) (ZNF8), mRNA

NM\_021116 Homo sapiens adenylate cyclase 1 (brain) (ADCY1), mRNA

NM\_021117 Homo sapiens cryptochrome 2 (photolyase-like) (CRY2), mRNA

NM\_021143 Homo saplens zinc finger protein 20 (KOX 13) (ZNF20), mRNA

NM\_021148 Homo sapiens zinc finger protein 273 (ZNF273), mRNA NM\_021149 Homo sapiens coactosin-like 1 (Dictyostelium) (COTL1), mRNA

NM\_021164 Homo sapiens splicing factor 4 (SF4), transcript variant b, mRNA

NM\_021165 Homo sapiens hypothetical protein from clone 24828 (KIAA1747), mRNA

NM 021180 Homo sapiens transcription factor CP2-like 4 (TFCP2L4), transcript variant 1 NM 021202 Homo sapiens tumor protein p53 inducible nuclear protein 2 (TP53INP2), mF

NM 021217 Homo saplens zinc finger protein 77 (pT1) (ZNF77), mRNA

NM 021218 Homo sapiens chromosome 9 open reading frame 80 (C9orf80), mRNA

NM 021222 Homo sapiens TcD37 homolog (HTCD37), mRNA

NM 021224 Homo saplens zinc finger protein 462 (ZNF462), mRNA

NM\_021227 Homo sapiens DC2 protein (DC2), mRNA

NM\_021228 Homo sapiens serine arginine-nch pre-mRNA splicing factor SR-A1 (SR-A1),

NM\_021237 Homo sapiens selenoprotein K (SELK), mRNA

NM\_021250 Homo saplens leukocyte lg-like receptor 9 (LIR9), transcript variant 1, mRNA NM\_021260 Homo sapiens zinc finger, FYVE domain containing 1 (ZFYVE1), transcript vi

NM\_021636 Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (L NM 021649 Homo sapiens toll-like receptor adaptor molecule 2 (TICAM2), mRNA

NM 021652 Homo sapiens SMA4 (SMA4), mRNA

NM 021915 Homo saplens zinc finger protein 69 (Cos5) (ZNF69), mRNA

NM 021916 Homo sapiens zinc finger protein 70 (Cos17) (ZNF70), mRNA

NM\_021936 Homo sapiens pappalysin 2 (PAPPA2), transcript variant 2, mRNA

NM\_021937 Homo saplens elongation factor for selenoprotein translation (SELB), mRNA

NM\_022045 Homo sapiens Mdm2, transformed 3T3 cell double minute 2, p53 binding pro

NM\_022075 Homo sapiens LAG1 longevity assurance homolog 2 (S. cerevisiae) (LASS2)

NM\_022080 Homo sapiens N-ethylmaleimide-sensitive factor attachment protein, beta (N

NM\_022085 Homo sapiens thioredoxin domain containing 5 (TXNDC5), transcript variant NM\_022092 Homo sapiens CTF18, chromosome transmission fidelity factor 18 homolog (

NM\_022106 Homo saplens chromosome 20 open reading frame 177 (C20orf177), mRNA

NM 022115 Homo sapiens PR domain containing 15 (PRDM15), mRNA NM 022138 Homo sapiens SPARC related modular calcium binding 2 (SMOC2), mRNA

NM 022160 Homo sapiens DMRT-like family A1 (DMRTA1), mRNA

NM\_022166 Homo sapiens xylosyltransferase I (XYLT1), mRNA NM 022351 Homo sapiens EF hand calcium binding protein 1 (EFCBP1), mRNA

NM\_022475 Homo sapiens hedgehog interacting protein (HHIP), mRNA NM\_022478 Homo sapiens cadherin-like 24 (CDH24), mRNA

NM\_022479 Homo sapiens Williams-Beuren syndrome chromosome region 17 (WBSCR1

NM 022486 Homo saplens sushi domain containing 1 (SUSD1), mRNA

NM 022491 Homo sapiens likely ortholog of mouse Sds3 (SDS3), mRNA

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NM\_022572 Homo sapiens myofibrillogenesis regulator 1 (MR-1), mRNA NM\_022733 Homo sapiens hypothetical protein AL133206 (LOC64744), mRNA NM\_022742 Homo sapiens hypothetical protein DKFZp434G156 (DKFZP434G156), mRN NM\_022745 Homo sapiens ATP synthase mitochondrial F1 complex assembly factor 1 (A NM 022757 Homo sapiens hypothetical protein FLJ12892 (FLJ12892), mRNA NM 022824 Homo sapiens F-box and leucine-rich repeat protein 17 (FBXL17), mRNA NM\_022833 Homo sapiens chromosome 9 open reading frame 88 (C9orf88), mRNA NM\_022835 Homo sapiens likely ortholog of mouse common-site lymphoma/leukemia GE NM\_022913 Homo sapiens vasculin (DKFZp761C169), mRNA NM\_023002 Homo sapiens hyaluronan and proteoglycan link protein 4 (HAPLN4), mRNA NM\_023006 Homo sapiens kallikrein 15 (KLK15), transcript variant 1, mRNA NM\_023939 Homo sapiens hypothetical protein MGC2752 (MGC2752), mRNA NM\_023943 Homo sapiens hypothetical protein MGC3040 (MGC3040), mRNA NM 024007 Homo sapiens early B-cell factor (EBF), mRNA NM\_024019 Homo sapiens neurogenin 2 (NEUROG2), mRNA NM 024100 Homo saplens WD repeat domain 18 (WDR18), mRNA NM\_024316 Homo sapiens leukocyte receptor cluster (LRC) member 1 (LENG1), mRNA NM 024335 Homo sapiens iroquois homeobox protein 6 (IRX6), mRNA NM\_024336 Homo sapiens iroquols homeobox protein 3 (IRX3), mRNA NM\_024342 Home sapiens glucocorticoid receptor DNA binding factor 1 (GRLF1), transci NM\_024344 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 2, mRNA NM\_024420 Homo sapiens phospholipase A2, group IVA (cytosolic, calcium-dependent) i NM\_024493 Homo saplens zinc finger protein 306 (ZNF306), mRNA NM\_024496 Homo sapiens chromosome 14 open reading frame 4 (C14orf4), mRNA NM\_024511 Homo sapiens chromosome 4 open reading frame 15 (C4orf15), mRNA NM 024517 Homo sapiens PHD finger protein 2 (PHF2), transcript variant 2, mRNA NM\_024553 Homo sapiens hypothetical protein FLJ20097 (FLJ20097), mRNA NM 024621 Homo sapiens hypothetical protein FLJ12604 (FLJ12604), mRNA NM\_024625 Homo sapiens zinc finger CCCH type, antiviral 1 (ZC3HAV1), transcript varia NM\_024684 Homo saplens PTD015 protein (PTD015), mRNA NM\_024742 Homo saplens armadillo repeat containing 5 (ARMC5), mRNA NM\_024769 Homo sapiens adipocyte-specific adhesion molecule (ASAM), mRNA NM\_024870 Homo saplens DEP domain containing 2 (DEPDC2), transcript variant 1, mR NM\_024878 Homo saplens CGI-72 protein (CGI-72), transcript variant 4, mRNA NM\_024933 Homo sapiens hypothetical protein FLJ12056 (FLJ12056), mRNA NM\_024953 Homo saplens hypothetical protein FLJ13089 (FLJ13089), mRNA NM\_025169 Homo sapiens zinc finger protein 167 (ZNF167), transcript variant 2, mRNA NM 025196 Homo sapiens GrpE-like 1, mitochondrial (E. coli) (GRPEL1), mRNA NM 025202 Homo sapiens EF hand domain containing 1 (EFHD1), mRNA NM 025219 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 5 (DNAJC5), m NM\_025224 Homo sapiens BTB (POZ) domain containing 4 (BTBD4), mRNA NM\_025248 Homo sapiens SNAP25-interacting protein (SNIP), mRNA NM\_025252 Homo saplens Ras association (RalGDS/AF-6) and pleckstrin homology dom NM\_025256 Homo sapiens HLA-B associated transcript 8 (BAT8), transcript variant NG36 NM\_030625 Homo sapiens CXXC finger 6 (CXXC6), mRNA NM 030627 Homo sapiens cytoplasmic polyadenylation element binding protein 4 (CPEB NM\_030628 Homo sapiens KIAA1698 protein (KIAA1698), mRNA NM 030629 Homo sapiens c-Maf-inducing protein (CMIP), transcript variant Tc-mip, mRN NM 030630 Homo sapiens chromosome 17 open reading frame 28 (C17orf28), mRNA NM 030633 Homo sapiens KIAA1712 (KIAA1712), mRNA NM\_030634 Homo sapiens zinc finger protein 436 (ZNF436), mRNA NM\_030636 Homo sapiens KIAA1706 protein (KIAA1706), mRNA NM\_030637 Homo sapiens DDHD domain containing 1 (DDHD1), mRNA NM\_030639 Homo sapiens KIAA1701 protein (KIAA1701), mRNA

NM\_030640 Homo sapiens dual specificity phosphatase 16 (DUSP16), mRNA

NM\_030644 Homo sapiens apolipoprotein L, 3 (APOL3), transcript variant alpha/b, mRNA

NM\_030645 Homo sapiens KIAA1720 protein (KIAA1720), mRNA

NM 030650 Homo sapiens KIAA1715 (KIAA1715), mRNA NM\_030789 Homo sapiens histocompatibility (minor) 13 (HM13), transcript variant 1, mRI NM 030812 Homo sapiens actin like protein (LOC81569), mRNA NM 030883 Homo sapiens olfactory receptor, family 2, subfamily H, member 1 (OR2H1), NM 030906 Homo sapiens serine/threonine kinase 33 (STK33), mRNA NM 030919 Homo sapiens chromosome 20 open reading frame 129 (C20orf129), mRNA NM\_030922 Homo sapiens non-imprinted in Prader-Willi/Angelman syndrome 2 (NIPA2), NM\_030923 Homo sapiens hypothetical protein DKFZp566N034 (DKFZP566N034), mRN NM 030949 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 14C (PPF NM 030957 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 030961 Homo sapiens tripartite motif-containing 56 (TRIM56), mRNA NM 030962 Homo sapiens Charcot-Marie-Tooth neuropathy 4B2 (autosomal recessive, v NM 031303 Homo sapiens similar to RIKEN cDNA 4933439B08 gene (MGC33211), mRN NM 031444 Homo sapiens chromosome 22 open reading frame 13 (C22orf13), mRNA NM\_031448 Homo sapiens chromosome 19 open reading frame 12 (C19orf12), mRNA NM\_031454 Homo sapiens selenoprotein O (SELO), mRNA NM 031467 Homo sapiens solute carrier family 4, sodium bicarbonate cotransporter, mer NM 031490 Homo sapiens peroxisomal lon protease (LONP), mRNA NM 031888 Homo sapiens pro-melanin-concentrating hormone-like 2 (PMCHL2), mRNA NM 031895 Homo sapiens calcium channel, voltage-dependent, gamma subunit 8 (CACI NM 031912 Homo saplens synaptotagmin XV (SYT15), transcript variant a, mRNA NM\_031913 Homo sapiens chr3 synaptotagmin (CHR3SYT), mRNA NM\_031914 Homo sapiens synaptotagmin XIV-like (SYT14L), mRNA NM\_031935 Homo sapiens hemicentin (FIBL-6), mRNA NM 032017 Homo sapiens Ser/Thr-like kinase (MGC4796), mRNA NM 032111 Homo saplens mitochondrial ribosomal protein L14 (MRPL14), nuclear gene NM 032119 Homo sapiens monogenic, audiogenic seizure susceptibility 1 homolog (mou NM 032123 Homo saplens kin of IRRE like 2 (Drosophila) (KIRREL2), transcript variant 1 NM\_032132 Homo sapiens HORMA domain containing protein (NOHMA), mRNA NM 032137 Homo saplens hypothetical protein DKFZp434N1817 (DKFZP434N1817), mf NM 032156 Homo saplens C1g domain containing 1 (C1QDC1), transcript variant 3, mRt NM\_032160 Homo sapiens chromosome 18 open reading frame 4 (C18orf4), mRNA NM\_032165 Homo sapiens hypothetical protein FLJ12303 (FLJ12303), mRNA NM\_032168 Homo sapiens hypothetical protein FLJ12519 (FLJ12519), mRNA NM\_032194 Homo sapiens brix domain containing 1 (BXDC1), mRNA NM 032195 Homo sapiens SON DNA binding protein (SON), transcript variant b, mRNA NM 032217 Homo sapiens ankyrin repeat domain 17 (ANKRD17), transcript variant 1, ml NM 032222 Homo saplens hypothetical protein FLJ22374 (FLJ22374), mRNA NM 032226 Homo saplens zinc finger, CCHC domain containing 7 (ZCCHC7), mRNA NM 032228 Homo sapiens male sterility domain containing 2 (MLSTD2), mRNA NM 032230 Homo saplens hypothetical protein FLJ22789 (FLJ22789), mRNA NM 032279 Homo saplens hypothetical protein DKFZp761I1011 (DKFZp761I1011), mRN NM 032282 Homo sapiens hypothetical protein DKFZp547D155 (DKFZp547D155), mRN. NM\_032283 Homo sapiens zinc finger, DHHC domain containing 18 (ZDHHC18), mRNA NM\_032285 Homo sapiens hypothetical protein MGC3207 (MGC3207), mRNA NM\_032286 Homo sapiens hypothetical protein MGC5309 (MGC5309), mRNA NM 032422 Homo sapiens G protein-coupled receptor 123 (GPR123), mRNA NM 032423 Homo sapiens zinc finger protein 528 (ZNF528), mRNA NM 032425 Homo sapiens KIAA1822 (KIAA1822), mRNA NM 032427 Homo sapiens mastermind-like 2 (Drosophila) (MAML2), mRNA NM 032429 Homo sapiens leucine zipper, putative tumor suppressor 2 (LZTS2), mRNA NM 032430 Homo sapiens KIAA1811 protein (KIAA1811), mRNA NM 032431 Homo sapiens HRD1 protein (HRD1), transcript variant 1, mRNA NM 032432 Homo sapiens actin binding LIM protein family, member 2 (ABLIM2), mRNA

NM\_032433 Homo sapiens zinc finger protein 333 (ZNF333), mRNA NM\_032434 Homo sapiens zinc finger protein 512 (ZNF512), mRNA NM\_032435 Homo sapiens mixed lineage kinase 4 (KIAA1804), mRNA

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- NM 032436 Homo sapiens chromosome 13 open reading frame 8 (C13orf8), mRNA NM 032439 Homo sapiens phytanoyl-CoA hydroxylase interacting protein-like (PHYHIPL) NM 032440 Homo sapiens ligand-dependent corepressor (MLR2), mRNA NM 032444 Homo sapiens BTB (POZ) domain containing 12 (BTBD12), mRNA NM 032448 Homo sapiens KIAA1838 (KIAA1838), mRNA NM 032452 Homo sapiens junctophilin 4 (JPH4), mRNA NM\_032458 Homo sapiens PHD finger protein 6 (PHF6), mRNA NM\_032477 Homo sapiens mitochondrial ribosomal protein L41 (MRPL41), nuclear gene NM 032478 Homo sapiens mitochondrial ribosomal protein L38 (MRPL38), nuclear gene NM 032479 Homo sapiens mitochondrial ribosomal protein L36 (MRPL36), nuclear gene NM 032482 Homo sapiens DOT1-like, histone H3 methyltransferase (S. cerevisiae) (DOT NM 032497 Homo sapiens zinc finger protein 559 (ZNF559), mRNA NM 032501 Homo sapiens acetyl-Coenzyme A synthetase 2 (AMP forming)-like (ACAS2I NM 032505 Homo sapiens T-cell activation kelch repeat protein (TA-KRP), mRNA NM 032506 Homo sapiens KIAA1841 protein (KIAA1841), mRNA NM 032508 Homo sapiens family with sequence similarity 11, member A (FAM11A), mR1 NM 032511 Homo sapiens chromosome 6 open reading frame 168 (C6orf168), mRNA NM 032512 Homo saplens PDZ domain containing 4 (PDZK4), mRNA NM\_032517 Homo sapiens lysozyme-like 1 (LYZL1), mRNA NM\_032528 Homo sapiens beta-galactoside alpha-2,6-sialyltransferase II (ST6GalII), mR NM 032531 Homo sapiens kin of IRRE like 3 (Drosophila) (KIRREL3), mRNA NM 032536 Homo saplens netrin G2 (NTNG2), mRNA NM 032539 Homo sapiens SLIT and NTRK-like family, member 2 (SLITRK2), mRNA NM 032550 Homo sapiens KIAA1914 (KIAA1914), transcript variant 2, mRNA NM 032552 Homo sapiens DAB2 interacting protein (DAB2IP), mRNA NM 032569 Homo sapiens cytokine-like nuclear factor n-pac (N-PAC), mRNA NM 032590 Homo sapiens F-box and leucine-rich repeat protein 10 (FBXL10), mRNA NM 032636 Homo sapiens differential display and activated by p53 (DDA3), mRNA NM 032869 Homo saplens chronic myelogenous leukemla tumor antigen 66 (CML66), ml NM 032870 Homo sapiens chromosome 6 open reading frame 111 (C6orf111), mRNA NM 032947 Homo sapiens putative small membrane protein NID67 (NID67), mRNA NM 033026 Homo saplens piccolo (presynaptic cytomatrix protein) (PCLO), transcript vai NM 033046 Homo saplens rhotekin (RTKN), mRNA NM 033052 Homo sapiens DMRT-like family C2 (DMRTC2), mRNA NM\_033053 Homo saplens DMRT-like family C1 (DMRTC1), mRNA NM 033055 Homo sapiens hippocampus abundant transcript 1 (HIAT1), mRNA NM 033063 Homo sapiens microtubule-associated protein 6 (MAP6), transcript variant 1, NM\_033064 Homo sapiens ataxia, cerebellar, Cayman type (caytaxin) (ATCAY), mRNA NM 033067 Homo saplens DMRT-like family B with proline-rich C-terminal, 1 (DMRTB1). NM 033071 Homo sapiens spectrin repeat containing, nuclear envelope 1 (SYNE1), trans NM 033082 Homo saplens cytokine induced protein 29 kDa (CIP29), mRNA NM 033086 Homo sapiens FGD1 family, member 3 (FGD3), mRNA NM 033088 Home saplens family with sequence similarity 40, member A (FAM40A), mRt NM 033090 Homo saplens GREB1 protein (GREB1), transcript variant b, mRNA NM\_033107 Homo saplens hypothetical protein BC004923 (LOC85865), mRNA
- NM\_033109 Homo sapiens polyribonucleotide nucleotidyltransferase 1 (PNPT1), mRNA
- NM 033112 Homo sapiens chromosome 6 open reading frame 153 (C6orf153), mRNA
- NM 033121 Homo sapiens ankyrin repeat domain 13 (ANKRD13), mRNA
- NM\_033129 Homo sapiens scratch homolog 2, zinc finger protein (Drosophila) (SCRT2), NM\_033141 Homo sapiens mitogen-activated protein kinase kinase kinase 9 (MAP3K9), I
- NM 033161 Homo sapiens surfeit 4 (SURF4), mRNA

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- NM 033160 Homo sapiens DKFZP572C163 protein (DKFZP572C163), mRNA NM 033200 Homo sapiens hypothetical protein BC002942 (BC002942), mRNA
- NM 033201 Homo sapiens hypothetical gene BC008967 (BC008967), mRNA
- NM 033206 Homo sapiens hypothetical gene FLJ00060 (FLJ00060), mRNA
- NM 033253 Homo sapiens 5'-nucleotidase, cytosolic IB (NT5C1B), transcript variant 2, m.
- NM 033267 Homo saplens iroquois homeobox protein 2 (IRX2), mRNA

NM 033271 Homo sapiens BTB (POZ) domain containing 6 (BTBD6), mRNA NM 033276 Homo sapiens Ku70-binding protein 3 (KUB3), mRNA NM 033288 Homo saplens zinc finger protein 160 (ZNF160), transcript variant 1, mRNA NM 033364 Homo sapiens chromosome 3 open reading frame 15 (C3orf15), mRNA NM 033375 Homo sapiens myosin IC (MYO1C), mRNA NM 033386 Homo sapiens molecule interacting with Rab13 (MIRAB13), mRNA NM 033387 Homo sapiens chromosome 9 open reading frame 59 (C9orf59), mRNA NM 033389 Homo sapiens slingshot homolog 2 (Drosophila) (SSH2), mRNA NM\_033392 Homo sapiens mitogen-activated protein kinase 8 interacting protein 3 (MAPI NM 033393 Homo saplens KIAA1727 protein (KIAA1727), mRNA NM\_033396 Homo sapiens tankyrase 1 binding protein 1, 182kDa (TNKS1BP1), mRNA NM\_033397 Homo sapiens KIAA1754 (KIAA1754), mRNA NM\_033402 Homo sapiens KIAA1764 protein (KIAA1764), mRNA NM 033404 Homo saplens kinase non-catalytic C-lobe domain (KIND) containing 1 (KND NM 033405 Home sapiens peroxisomal proliferator-activated receptor A interacting comp NM 033407 Homo sapiens dedicator of cytokinesis 7 (DOCK7), mRNA NM 033425 Homo saplens DIX domain containing 1 (DIXDC1), mRNA NM 033426 Homo saplens KIAA1737 (KIAA1737), mRNA NM 033429 Homo sapiens calmodulin-like 4 (CALML4), mRNA NM\_033449 Homo saplens FCH and double SH3 domains 1 (FCHSD1), mRNA NM\_033450 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 10 NM\_033452 Homo saplens tripartite motif-containing 47 (TRIM47), mRNA NM 033505 Homo sapiens selenoprotein I, 1 (SELI), mRNA NM 033510 Homo sapiens dispatched homolog 2 (Drosophila) (DISP2), mRNA NM 033512 Homo sapiens TSPY-like 5 (TSPYL5), mRNA NM\_033513 Homo sapiens chromosome 19 open reading frame 20 (C19orf20), mRNA NM\_033520 Homo sapiens chromosome 19 open reading frame 33 (C19orf33), mRNA NM 033542 Homo sapiens chromosome 20 open reading frame 35 (C20orf35), mRNA NM 033548 Homo saplens similar to ZINC FINGER PROTEIN 257 (BONE MARROW ZIN NM\_033553 Homo sapiens guanylate cyclase activator 2A (guanylin) (GUCA2A), mRNA NM 033557 Home saniens similar to putative transmembrane protein; homolog of yeast ( NM 033631 Homo saniens leudne zinner protein 1 (LUZP1), mRNA NM 033647 Homo saplens helicase (DNA) B (HELB), mRNA NM\_033666 Homo sapiens integrin, beta 1 (fibronectin receptor, beta polypeptide, antiger NM\_033667 Homo sapiens integrin, beta 1 (fibronectin receptor, beta polypeptide, antiger NM 033668 Homo saplens integrin, beta 1 (fibronectin receptor, beta polypeptide, antiger NM 033669 Homo saplens Integrin, beta 1 (fibronectin receptor, beta polypeptide, antiger NM 052843 Homo saplens obscurin, cytoskeletal calmodulin and titin-interacting RhoGEI NM\_052846 Homo sapiens elastin microfibril interfacer 3 (EMILIN3), mRNA NM\_052847 Homo saplens guanine nucleotide binding protein (G protein), gamma 7 (GN NM 052849 Homo saplens hypothetical protein MGC20481 (MGC20481), mRNA NM\_052850 Homo saplens growth arrest and DNA-damage-inducible, gamma interacting NM\_052857 Homo sapiens hypothetical protein MGC20398 (MGC20398), mRNA NM 052864 Homo saplens TRAF2 binding protein (T2BP), mRNA NM 052867 Homo sapiens voltage gated channel like 1 (VGCNL1), mRNA NM 052878 Home sapiens chromosome 19 open reading frame 36 (C19orf36), mRNA NM 052892 Homo sapiens polycystic kidney disease 1-like 2 (PKD1L2), transcript variant NM 052896 Homo sapiens CUB and Sushi multiple domains 2 (CSMD2), mRNA NM\_052897 Homo sapiens methyl-CpG binding domain protein 6 (MBD6), mRNA NM 052899 Homo sapiens G protein-regulated inducer of neurite outgrowth 1 (KIAA1893 NM 052900 Homo sapiens CUB and Sushi multiple domains 3 (CSMD3), transcript variar NM 052901 Homo sapiens solute carrier family 25 (mitochondrial carrier; phosphate carri NM 052902 Homo sapiens serine/threonine kinase 11 interacting protein (STK11IP), mRI

NM 052903 Homo sapiens tubulin, gamma complex associated protein 5 (TUBGCP5), m NM 052904 Homo sapiens KIAA1900 (KIAA1900), mRNA

NM 052905 Homo sapiens formin-like 2 (FMNL2), mRNA

NM 052909 Homo sapiens KIAA1909 protein (KIAA1909), mRNA

NM 052910 Homo sapiens SLIT and NTRK-like family, member 1 (SLITRK1), mRNA NM 052911 Homo sapiens establishment factor-like protein (EFO1), mRNA NM 052913 Homo sapiens KIAA1913 (KIAA1913), mRNA NM\_052917 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga NM 052923 Homo sapiens zinc finger protein 452 (ZNF452), mRNA NM 052924 Homo sapiens rhophilin, Rho GTPase binding protein 1 (RHPN1), mRNA NM 052925 Homo sapiens leukocyte receptor cluster (LRC) member 8 (LENG8), mRNA NM\_052926 Homo sapiens paraneoplastic antigen like 5 (PNMA5), mRNA NM 052928 Homo sapiens SET and MYND domain containing 4 (SMYD4), mRNA NM 052937 Homo sapiens similar to hypothetical protein FLJ10883 (LOC115294), mRN/ NM 052964 Homo sapiens mast cell immunoreceptor signal transducer (MIST), mRNA NM 052965 Homo sapiens chromosome 1 open reading frame 19 (C1orf19), mRNA NM 053041 Homo sapiens COMM domain containing 7 (COMMD7), mRNA NM 053044 Homo sapiens serine protease HTRA3 (HTRA3), mRNA NM 053051 Homo sapiens LYST-interacting protein LIP8 (LIP8), mRNA NM\_053052 Homo sapiens SVAP1 protein (IMAGE3451454), mRNA NM\_053277 Homo saplens chloride intracellular channel 6 (CLIC6), mRNA NM\_053279 Homo sapiens chromosome 8 open reading frame 13 (C8orf13), mRNA NM\_053282 Homo sapiens SH2 domain-containing molecule EAT2 (EAT2), mRNA NM 054104 Homo sapiens olfactory receptor, family 6, subfamily C, member 3 (OR6C3), NM 054105 Homo sapiens olfactory receptor, family 6, subfamily C, member 2 (OR6C2). NM 057163 Homo saplens gonadotropin-releasing hormone (type 2) receptor 2 (GNRHR NM 058163 Homo sapiens hypothetical protein DT1P1A10 (DT1P1A10), mRNA NM 058243 Homo sapiens bromodomain containing 4 (BRD4), transcript variant long, mf NM 080574 Homo sapiens chromosome 20 open reading frame 70 (C20orf70), mRNA NM 080614 Homo sapiens WAP four-disulfide core domain 3 (WFDC3), transcript varian NM\_080618 Homo sapiens CCCTC-binding factor (zinc finger protein)-like (CTCFL), mRN NM 080622 Home sapiens chromosome 20 open reading frame 135 (C20orf135), mRNA NM 080725 Homo saplens chromosome 20 open reading frame 139 (C20orf139), mRNA NM 080747 Homo sapiens keratin protein K6irs (K6IRS2), mRNA NM 080751 Homo saplens transmembrane channel-like 2 (TMC2), mRNA NM 080753 Homo sapiens WAP four-disulfide core domain 10A (WFDC10A), mRNA NM 080757 Homo saplens chromosome 20 open reading frame 127 (C20orf127), mRNA NM 080764 Homo sapiens suppressor of hairy wing homolog 2 (Drosophila) (SUHW2), m NM 080827 Homo sapiens WAP four-disulfide core domain 6 (WFDC6), mRNA NM 080833 Homo sapiens chromosome 20 open reading frame 151 (C20orf151), mRNA NM 080836 Homo sapiens serine/threonine kinase 35 (STK35), mRNA NM\_080865 Homo sapiens G protein-coupled receptor 62 (GPR62), mRNA NM\_080866 Homo sapiens solute carrier family 22 (organic anion/cation transporter), mer NM 080868 Home sapiens ankyrin repeat and SOCS box-containing 17 (ASB17), mRNA NM 080869 Homo sapiens WAP four-disulfide core domain 12 (WFDC12), mRNA NM 080875 Homo sapiens skeletrophin (LOC142678), mRNA NM 080877 Home sapiens solute carrier family 34 (sodium phosphate), member 3 (SLC3 NM 080911 Homo sapiens uracil-DNA glycosylase (UNG), nuclear gene encoding mitoch NM 080928 Homo sapiens ankyrin repeat and SOCS box-containing 15 (ASB15), mRNA NM 101395 Homo sapiens dual-specificity tyrosine-(Y)-phosphorylation regulated kinase NM 130391 Homo sapiens protein tyrosine phosphatase, receptor type, D (PTPRD), trans NM\_130392 Homo sapiens protein tyrosine phosphatase, receptor type, D (PTPRD), trans NM\_130393 Homo sapiens protein tyrosine phosphatase, receptor type, D (PTPRD), trans NM\_130435 Homo sapiens protein tyrosine phosphatase, receptor type, E (PTPRE), trans NM\_130436 Homo sapiens dual-specificity tyrosine-(Y)-phosphorylation regulated kinase NM 130437 Homo sapiens dual-specificity tyrosine-(Y)-phosphorylation regulated kinase NM 130438 Homo sapiens dual-specificity tyrosine-(Y)-phosphorylation regulated kinase NM 130440 Homo sapiens protein tyrosine phosphatase, receptor type, F (PTPRF), trans NM 130442 Homo sapiens engulfment and cell motility 1 (ced-12 homolog, C. elegans) (I NM 130444 Homo sapiens collagen, type XVIII, alpha 1 (COL18A1), transcript variant 3, I NM 130445 Home sapiens collagen, type XVIII, alpha 1 (COL18A1), transcript variant 2.1

NM 130465 Homo sapiens F-box protein 23 (FBXO23), mRNA NM 130466 Homo sapiens ubiquitin protein ligase E3B (UBE3B), transcript variant 1, mR NM 130470 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM 130471 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM\_130472 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM\_130473 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM\_130474 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM 130475 Homo sapiens MAP-kinase activating death domain (MADD), transcript varia NM 130476 Homo sapiens MAP-kinase activating death domain (MADD), transcript vana NM\_130760 Homo sapiens mucosal vascular addressin cell adhesion molecule 1 (MADC NM\_130761 Homo sapiens mucosal vascular addressin cell adhesion molecule 1 (MADC. NM\_130762 Homo sapiens mucosal vascular addressin cell adhesion molecule 1 (MADC. NM\_130766 Homo sapiens skeletal muscle and kidney enriched inositol phosphatase (Sk NM\_130771 Homo sapiens osteoclast-associated receptor (OSCAR), transcript variant 3, NM 130775 Homo sapiens XAGE-5 protein (XAGE-5), mRNA NM 130776 Homo sapiens G antigen, family D, 4 (GAGED4), transcript variant 2, mRNA NM 130777 Homo sapiens G antigen, family D, 3 (GAGED3), mRNA NM 130788 Homo sapiens WW domain containing oxidoreductase (WWOX), transcript v NM 130790 Homo sapiens WW domain containing oxidoreductase (WWOX), transcript v NM\_130791 Homo saplens WW domain containing oxidoreductase (WWOX), transcript v NM\_130792 Homo sapiens WW domain containing oxidoreductase (WWOX), transcript v NM\_130793 Homo saplens nucleolar protein family 6 (RNA-associated) (NOL6), transcrip NM\_130794 Homo sapiens cystatin 11 (CST11), transcript variant 1, mRNA NM\_130797 Homo sapiens dipeptidylpeptidase 6 (DPP6), transcript variant 1, mRNA NM\_130798 Homo sapiens synaptosomal-associated protein, 23kDa (SNAP23), transcrip NM\_130799 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant 2, m NM\_130800 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant e1B, NM\_130801 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant e1C, NM\_130802 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant e1D, NM\_130803 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant e1E, NM\_130804 Homo sapiens multiple endocrine neoplasia I (MEN1), transcript variant e1F1 NM\_130808 Homo saplens leucine-rich repeat-containing G protein-coupled receptor 8 (L NM\_130807 Homo sapiens MOB1, Mps One Binder kinase activator-like 2A (yeast) (MOB NM\_130808 Homo saplens copine IV (CPNE4), mRNA NM\_130809 Homo sapiens hypothetical protein MGC12103 (LOC133619), mRNA NM\_130810 Homo saplens dyslexia susceptibility 1 candidate 1 (DYX1C1), mRNA NM\_130811 Homo sapiens synaptosomal-associated protein, 25kDa (SNAP25), transcrip NM\_130830 Homo saplens leucine rich repeat containing 15 (LRRC15), mRNA NM\_130831 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130832 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130833 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130834 Homo saplens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130835 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130836 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130837 Homo sapiens optic atrophy 1 (autosomal dominant) (OPA1), nuclear gene e NM\_130838 Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-assoc NM\_130839 Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-assoc NM\_130840 Homo sapiens ATPase, H+ transporting, lysosomal V0 subunit a isoform 4 (/ NM\_130841 Homo sapiens ATPase, H+ transporting, lysosomal V0 subunit a isoform 4 (A NM 130842 Homo sapiens protein tyrosine phosphatase, receptor type, N polypeptide 2 ( NM\_130843 Homo sapiens protein tyrosine phosphatase, receptor type, N polypeptide 2 ( NM\_130844 Homo sapiens WW domain containing oxidoreductase (WWOX), transcript v NM\_130845 Homo sapiens syntrophin, beta 2 (dystrophin-associated protein A1, 59kDa, NM\_130846 Homo sapiens protein tyrosine phosphatase, receptor type, R (PTPRR), trans NM\_130847 Homo sapiens angiomotin like 1 (AMOTL1), mRNA NM\_130848 Homo saplens dendritic cell nuclear protein 1 (DCNP1), mRNA NM\_130849 Homo sapiens solute carrier family 39 (zinc transporter), member 4 (SLC39A

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NM\_130850 Homo sapiens bone morphogenetic protein 4 (BMP4), transcript variant 2, m NM\_130851 Homo sapiens bone morphogenetic protein 4 (BMP4), transcript variant 3, m NM\_130852 Homo sapiens palate, lung and nasal epithelium carcinoma associated (PLU NM\_130853 Homo saplens protein tyrosine phosphatase, receptor type, S (PTPRS), trans NM 130854 Homo sapiens protein tyrosine phosphatase, receptor type, S (PTPRS), trans NM 130855 Homo sapiens protein tyrosine phosphatase, receptor type, S (PTPRS), trans NM 130896 Homo sapiens WAP four-disulfide core domain 8 (WFDC8), transcript varian NM 130897 Homo sapiens dynein, cytoplasmic, light polypeptide 2B (DNCL2B), mRNA NM 130898 Homo sapiens cAMP responsive element binding protein 3-like 4 (CREB3L4) NM 130899 Homo sapiens hypothetical protein MGC26988 (MGC26988), mRNA NM 130900 Homo sapiens retinoic acid early transcript 1L (RAET1L), mRNA NM\_130901 Homo sapiens chromosome 15 open reading frame 16 (C15orf16), mRNA NM\_130902 Homo sapiens cytochrome c oxidase subunit VIIb2 (COX7B2), mRNA NM\_130906 Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 3 (PPIL3), transcript NM\_131915 Homo sapiens similar to hypothetical protein DKFZp434K191 (H. sapiens) (L NM\_131916 Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 3 (PPIL3), transcript NM\_131917 Homo sapiens Fas (TNFRSF6) associated factor 1 (FAF1), transcript variant NM\_133168 Homo sapiens osteoclast-associated receptor (OSCAR), transcript variant 5, NM\_133169 Homo saplens osteoclast-associated receptor (OSCAR), transcript variant 4, NM\_133170 Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), trans NM\_133171 Homo sapiens engulfment and cell motility 2 (ced-12 homolog, C. elegans) (I NM\_133172 Homo sapiens amylold beta (A4) precursor protein-blnding, family B, membe NM\_133173 Homo sapiens amyloid beta (A4) precursor protein-binding, family B, membe NM\_133174 Homo sapiens amyloid beta (A4) precursor protein-binding, family B, membe NM\_133175 Homo sapiens amyloid beta (A4) precursor protein-binding, family B, membe NM\_133176 Homo sapiens amylold beta (A4) precursor protein-binding, family B, membe NM\_133177 Homo sapiens protein tyrosine phosphatase, receptor type, U (PTPRU), trans NM\_133178 Homo sapiens protein tyrosine phosphatase, receptor type, U (PTPRU), trans NM\_133179 Homo sapiens G antigen, family D, 4 (GAGED4), transcript variant 1, mRNA NM\_133180 Homo saplens EPS8-like 1 (EPS8L1), transcript variant 1, mRNA NM\_133181 Homo sapiens EPS8-like 3 (EPS8L3), transcript variant 2, mRNA NM\_133259 Homo sapiens leucine-rich PPR-motif containing (LRPPRC), mRNA NM\_133261 Homo sapiens PDZ domain protein GIPC3 (GIPC3), mRNA NM\_133262 Homo saplens ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G Isol NM\_133263 Homo sapiens peroxisome proliferative activated receptor, gamma, coactivat NM\_133264 Homo sapiens WIRE protein (WIRE), mRNA NM\_133265 Homo sapiens angiomotin (AMOT), mRNA NM\_133266 Homo saplens SH3 and multiple ankyrin repeat domains 2 (SHANK2), transc NM\_133267 Homo sapiens homeobox protein GSH-2 (GSH-2), mRNA NM 133268 Homo sapiens oxysterol binding protein-like 1A (OSBPL1A), transcript varian NM\_133269 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 2, r NM\_133271 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 3, r NM\_133272 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 4, r NM\_133273 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 5, r NM\_133274 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 6, r NM\_133277 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 7, r NM\_133278 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 8, r NM\_133279 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 9, r NM\_133280 Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 10. NM 133282 Homo sapiens RAD1 homolog (S. pombe) (RAD1), transcript variant 2, mRN NM 133325 Homo sapiens PHD finger protein 10 (PHF10), transcript variant 2, mRNA NM 133326 Homo sapiens ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G isol NM\_133327 Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic NM\_133328 Homo sapiens death effector domain containing 2 (DEDD2), mRNA NM\_133329 Homo sapiens potassium voltage-gated channel, subfamily G, member 3 (KC NM 133330 Homo sapiens Wolf-Hirschhom syndrome candidate 1 (WHSC1), transcript v NM 133331 Homo sapiens Wolf-Hirschhom syndrome candidate 1 (WHSC1), transcript \

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NM_133332 Homo sapiens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript v
 NM 133333 Homo saplens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript v
 NM 133334 Homo sapiens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript v
 NM 133335 Homo sapiens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript v
 NM 133336 Homo sapiens Wolf-Hirschhorn syndrome candidate 1 (WHSC1), transcript v
 NM 133337 Homo sapiens fer-1-like 3, myoferlin (C. elegans) (FER1L3), transcript variar
 NM 133338 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 1, mF
 NM_133339 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 2, mF
 NM_133340 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 3, mF
 NM_133341 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 4, mF
NM_133342 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 5, mF
NM_133343 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 6, mF
NM_133344 Homo sapiens RAD17 homolog (S. pombe) (RAD17), transcript variant 7, mF
NM_133367 Homo sapiens chromosome 6 open reading frame 33 (C6orf33), mRNA
NM 133368 Homo sapiens KIAA1972 protein (KIAA1972), mRNA
NM 133370 Homo saplens splicing factor YT521-B (YT521), mRNA
NM 133371 Homo sapiens myozenin 3 (MYOZ3), mRNA
NM 133373 Homo sapiens phospholipase C, delta 3 (PLCD3), mRNA
NM 133375 Homo sapiens hypothetical protein MGC4562 (MGC4562), mRNA
NM_133376 Homo sapiens integrin, beta 1 (fibronectin receptor, beta polypeptide, antiger
NM_133377 Homo sapiens RAD1 homolog (S. pombe) (RAD1), transcript variant 3, mRN
NM_133378 Homo saplens titin (TTN), transcript variant N2-A, mRNA
NM_133379 Homo sapiens titin (TTN), transcript variant novex-3, mRNA
NM_133430 Homo sapiens G antigen, family D, 2 (GAGED2), transcript variant 3, mRNA
NM_133431 Homo saplens G antigen, family D, 2 (GAGED2), transcript variant 2, mRNA
NM_133432 Homo sapiens titln (TTN), transcript variant novex-1, mRNA
NM_133433 Homo sapiens Nipped-B homolog (Drosophila) (NIPBL), transcript variant A,
NM_133436 Homo sapiens asparagine synthetase (ASNS), transcript variant 1, mRNA
NM_133437 Homo sapiens titin (TTN), transcript variant novex-2, mRNA
NM_133439 Homo saplens transcriptional adaptor 2 (ADA2 homolog, yeast)-like (TADA2I
NM_133443 Homo saplens glutamic pyruvate transaminase (alanine aminotransferase) 2
NM_133444 Homo saplens zinc finger protein 526 (ZNF526), mRNA
NM_133445 Homo sapiens glutamate receptor, ionotropic, N-methyl-D-aspartate 3A (GRI
NM_133446 Homo saplens centaurin, gamma-like family, member 1 (CTGLF1), mRNA
NM_133448 Homo sapiens KIAA1944 protein (KIAA1944), mRNA
NM_133450 Homo sapiens KIAA1977 protein (KIAA1977), mRNA
NM_133452 Homo sapiens RAVER1 (RAVER1), mRNA
NM_133455 Homo saplens EMI domain containing 1 (EMID1), mRNA
NM_133456 Homo sapiens apical protein 2 (APXL2), mRNA
NM_133457 Homo saplens EMI domain containing 2 (EMID2), mRNA
NM_133459 Homo saplens KIAA1983 protein (FLJ30681), mRNA
NM_133462 Homo sapiens tetratricopeptide repeat domain 14 (TTC14), mRNA
NM_133466 Homo saplens zinc finger protein 545 (ZNF545), mRNA
NM_133467 Homo saplens Cbp/p300-interacting transactivator, with Glu/Asp-rich carbox
NM_133468 Homo sapiens BMP-binding endothelial regulator precursor protein (BMPER)
NM_133473 Homo sapiens zinc finger protein 431 (ZNF431), mRNA
NM_133474 Homo sapiens KIAA1982 protein (KIAA1982), mRNA
NM_133476 Homo sapiens zinc finger protein 384 (ZNF384), mRNA
NM 133478 Homo sapiens solute carrier family 4, sodium bicarbonate cotransporter, mer
NM_133479 Homo sapiens solute carrier family 4, sodium bicarbonate cotransporter, mer
NM_133480 Homo sapiens transcriptional adaptor 3 (NGG1 homolog, yeast)-like (TADA3
NM_133481 Homo sapiens transcriptional adaptor 3 (NGG1 homolog, yeast)-like (TADA3
NM_133482 Homo sapiens RAD50 homolog (S. cerevisiae) (RAD50), transcript variant 2,
NM_133483 Homo sapiens RAC/CDC42 exchange factor (GEFT), transcript variant 2, mF
NM 133484 Homo sapiens TRAF family member-associated NFKB activator (TANK), transport
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NM\_133489 Homo sapiens solute carrier family 26, member 10 (SLC26A10), mRNA NM\_133490 Homo sapiens potassium voltage-gated channel, subfamily G, member 4 (KC NM 133491 Homo sapiens spermidine/spermine N1-acetyltransferase 2 (SAT2), mRNA NM\_133492 Homo sapiens N-acylsphingosine amidohydrolase (alkaline ceramidase) 3 (# NM\_133493 Homo sapiens CD109 antigen (Gov platelet alloantigens) (CD109), mRNA NM\_133494 Homo sapiens NIMA (never in mitosis gene a)-related kinase 7 (NEK7), mRN NM\_133496 Homo sapiens solute carrier family 30 (zinc transporter), member 7 (SLC30A NM\_133497 Homo sapiens potassium channel, subfamily V, member 2 (KCNV2), mRNA NM 133498 Homo sapiens sperm acrosome associated 4 (SPACA4), mRNA NM 133499 Homo sapiens synapsin I (SYN1), transcript variant lb, mRNA NM\_133502 Homo sapiens zinc finger protein 274 (ZNF274), transcript variant ZNF274c, NM\_133503 Homo sapiens decorin (DCN), transcript variant A2, mRNA NM\_133504 Homo sapiens decorin (DCN), transcript variant B, mRNA NM\_133505 Homo sapiens decorin (DCN), transcript variant C, mRNA NM\_133506 Homo sapiens decorin (DCN), transcript variant D, mRNA NM\_133507 Homo sapiens deconn (DCN), transcript variant E, mRNA NM 133509 Homo sapiens RAD51-like 1 (S. cerevisiae) (RAD51L1), transcript variant 3, NM 133510 Homo sapiens RAD51-like 1 (S. cerevisiae) (RAD51L1), transcript variant 2, NM\_133625 Homo sapiens synapsin II (SYN2), transcript variant IIa, mRNA NM\_133627 Homo saplens RAD51-like 3 (S. cerevislae) (RAD51L3), transcript variant 2, NM\_133628 Homo sapiens RAD51-like 3 (S. cerevisiae) (RAD51L3), transcript variant 3. NM 133629 Homo sapiens RAD51-like 3 (S. cerevisiae) (RAD51L3), transcript variant 4, NM\_133630 Homo sapiens RAD51-like 3 (S. cerevisiae) (RAD51L3), transcript variant 5, NM\_133631 Homo sapiens roundabout, axon guldance receptor, homolog 1 (Drosophila) NM\_133632 Homo sapiens synapsin III (SYN3), transcript variant IIIb, mRNA NM\_133633 Homo sapiens synapsin III (SYN3), transcript variant IIic, mRNA NM\_133634 Homo sapiens protein O-fucosyltransferase 2 (POFUT2), transcript variant 2. NM\_133635 Homo sapiens protein O-fucosyltransferase 2 (POFUT2), transcript variant 3, NM\_133636 Homo sapiens DNA helicase HEL308 (HEL308), mRNA NM\_133637 Homo sapiens DEAQ box polypeptide 1 (RNA-dependent ATPase) (DQX1), I NM 133638 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_133639 Homo saplens ras homolog gene family, member V (RHOV), mRNA NM\_133640 Homo saplens surfeit 5 (SURF5), transcript variant b, mRNA NM\_133642 Homo sapiens like-glycosyltransferase (LARGE), transcript variant 2, mRNA NM\_133644 Homo sapiens GTP binding protein 3 (mitochondrial) (GTPBP3), mRNA NM\_133645 Homo saplens mitochondrial translation optimization 1 homolog (S. cerevisia NM\_133646 Homo sapiens sterile alpha motif and leucine zipper containing kinase AZK (. NM\_133650 Homo sapiens spectrin repeat containing, nuclear envelope 1 (SYNE1), trans NM\_134258 Homo sapiens transducin (beta)-like 1Y-linked (TBL1Y), transcript variant 2,1 NM 134259 Homo sapiens transducin (beta)-like 1Y-linked (TBL1Y), transcript variant 3,1 NM 134260 Homo sapiens RAR-related orphan receptor A (RORA), transcript variant 2, r NM 134261 Homo sapiens RAR-related orphan receptor A (RORA), transcript variant 1, r NM\_134262 Homo sapiens RAR-related orphan receptor A (RORA), transcript variant 4, r NM\_134263 Homo sapiens solute carrier family 26, member 6 (SLC26A6), transcript varie NM\_134264 Homo sapiens WD repeat and SOCS box-containing 1 (WSB1), transcript va NM\_134265 Homo sapiens WD repeat and SOCS box-containing 1 (WSB1), transcript va NM\_134266 Homo sapiens solute carrier family 26, member 7 (SLC26A7), transcript varia NM\_134268 Homo sapiens cytoglobin (CYGB), mRNA NM\_134269 Homo sapiens smoothelin (SMTN), transcript variant 2, mRNA NM\_134270 Homo sapiens smoothelin (SMTN), transcript variant 1, mRNA NM\_134323 Homo sapiens TAR (HIV) RNA binding protein 2 (TARBP2), transcript varian NM 134324 Homo sapiens TAR (HIV) RNA binding protein 2 (TARBP2), transcript varian NM\_134325 Homo sapiens solute carrier family 26, member 9 (SLC26A9), transcript varie NM\_134421 Homo sapiens hippocalcin-like 1 (HPCAL1), transcript variant 2, mRNA NM\_134422 Homo sapiens RAD52 homolog (S. cerevisiae) (RAD52), transcript variant de

NM\_134423 Homo saplens RAD52 homolog (S. cerevisiae) (RAD52), transcript variant ga NM\_134424 Homo saplens RAD52 homolog (S. cerevisiae) (RAD52), transcript variant be

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NM 134425 Homo sapiens solute carrier family 26 (sulfate transporter), member 1 (SLC2 NM 134426 Homo sapiens solute carrier family 26, member 6 (SLC26A6), transcript varia NM\_134427 Homo sapiens regulator of G-protein signalling 3 (RGS3), transcript variant 4 NM\_134428 Homo sapiens regulatory factor X, 3 (influences HLA class II expression) (RF NM\_134431 Homo sapiens solute carrier organic anion transporter family, member 1A2 ( NM 134433 Homo sapiens regulatory factor X, 2 (influences HLA class II expression) (RF NM 134434 Homo sapiens RAD54 homolog B (S. cerevisiae) (RAD54B), transcript variar NM 134440 Homo sapiens regulatory factor X-associated ankyrin-containing protein (RF) NM\_134441 Homo sapiens relaxin 2 (H2) (RLN2), transcript variant 1, mRNA NM\_134442 Homo sapiens cAMP responsive element binding protein 1 (CREB1), transcr NM 134444 Homo saplens NACHT, leucine rich repeat and PYD containing 4 (NALP4), n NM 134445 Homo sapiens CD99 antigen-like 2 (CD99L2), mRNA NM\_134446 Homo sapiens CD99 antigen-like 2 (CD99L2), mRNA NM\_134447 Homo sapiens chromosome 19 open reading frame 2 (C19orf2), transcript ve NM\_134470 Homo sapiens interleukin 1 receptor accessory protein (IL1RAP), transcript v NM\_138270 Homo sapiens alpha thalassemia/mental retardation syndrome X-linked (RAI NM 138271 Homo sapiens alpha thalassemia/mental retardation syndrome X-linked (RAI NM 138272 Homo sapiens chromosome 6 open reading frame 25 (C6orf25), transcript vs NM 138273 Homo sapiens chromosome 6 open reading frame 25 (C6orf25), transcript ve NM\_138274 Homo saplens chromosome 6 open reading frame 25 (C6orf25), transcript va NM 138275 Homo sapiens chromosome 6 open reading frame 25 (C6orf25), transcript vs NM\_138276 Homo saplens chromosome 6 open reading frame 25 (C6orf25), transcript ve NM\_138277 Homo sapiens chromosome 6 open reading frame 25 (C6orf25), transcript va NM 138278 Homo sapiens BCL2/adenovirus E1B 19kD interacting protein like (BNIPL), r NM\_138279 Homo sapiens BCL2/adenovirus E1B 19kD Interacting protein like (BNIPL), r NM\_138280 Homo sapiens citrate lyase beta like (CLYBL), transcript variant 1, mRNA NM\_138281 Homo sapiens distal-less homeobox 4 (DLX4), transcript variant 1, mRNA NM\_138282 Homo sapiens ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G isol NM 138283 Homo saplens cystatin-like 1 (CSTL1), mRNA NM 138284 Homo sapiens interleukin 17D (IL17D), mRNA NM 138285 Homo saplens nucleoporin 35kDa (NUP35), mRNA NM\_138286 Homo sapiens hypothetical protein FLJ31526 (LOC148213), mRNA NM 138287 Homo sapiens rhysin 2 (BBAP), mRNA NM 138288 Homo sapiens chromosome 14 open reading frame 147 (C14orf147), mRNA NM\_138289 Homo sapiens actin-related protein T1 (ACTRT1), mRNA NM\_138290 Homo sapiens Rap2-binding protein 9 (RPIB9), mRNA NM\_138292 Homo sapiens ataxia telangiectasia mutated (includes complementation grou NM\_138293 Homo sapiens ataxia telanglectasia mutated (includes complementation grou NM\_138294 Homo sapiens expressed in prostate and testis (PATE), mRNA NM 138295 Homo sapiens polycystic kidney disease 1 like 1 (PKD1L1), mRNA NM 138296 Homo sapiens pre T-cell antigen receptor alpha (PTCRA), mRNA NM 138297 Homo sapiens mucin 4, tracheobronchial (MUC4), transcript variant 5, mRN/ NM 138298 Homo sapiens mucin 4, tracheobronchial (MUC4), transcript variant 2, mRN/ NM 138299 Homo sapiens mucin 4, tracheobronchial (MUC4), transcript variant 3, mRN/ NM\_138300 Homo sapiens pygopus 2 (PYGO2), mRNA NM\_138316 Homo sapiens pantothenate kinase 1 (PANK1), transcript variant gamma, ml NM\_138317 Homo sapiens potassium channel, subfamily K, member 10 (KCNK10), trans NM\_138318 Homo sapiens potassium channel, subfamily K, member 10 (KCNK10), trans NM\_138319 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM 138320 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM\_138321 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM 138322 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM 138323 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM 138324 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM\_138325 Homo sapiens proprotein convertase subtilisin/kexin type 6 (PCSK6), transcr NM 138326 Homo sapiens aminocarboxymuconate semialdehyde decarboxylase (ACMS NM 138327 Homo sapiens trace amine receptor 1 (TRAR1), mRNA

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NM 138328 Homo sapiens rhomboid, veinlet-like 4 (Drosonhila) (RHBDL4), mRNA NM\_138329 Homo sapiens NACHT, leucine rich repeat and PYD containing 6 (NALP6), n NM 138330 Homo sapiens TRAF6-inhibitory zinc finger protein (TIZ), mRNA NM 138331 Homo sapiens ribonuclease, RNase A family, 8 (RNASE8), mRNA NM 138333 Homo sapiens chromosome 9 open reading frame 42 (C9orf42), mRNA NM 138334 Homo sapiens hypothetical transmembrane protein SBBI54 (SBBI54), mRNA NM 138335 Homo sapiens glucosamine-6-phosphate deaminase 2 (GNPDA2), mRNA NM 138336 Homo sapiens helicase/primase complex protein (LOC150678), mRNA NM 138337 Homo sapiens myeloid inhibitory C-type lectin-like receptor (MICL), transcript NM 138338 Homo sapiens polymerase (RNA) III (DNA directed) polypeptide H (22.9kD) ( NM\_138340 Homo sapiens abhydrolase domain containing 3 (ABHD3), mRNA NM\_138341 Homo sapiens hypothetical protein BC000282 (LOC89894), mRNA NM 138342 Homo sapiens hypothetical protein BC008326 (LOC89944), mRNA NM 138343 Homo sapiens kinesin-like 8 (KNSL8), transcript variant 4, mRNA NM 138344 Homo sapiens chromosome 14 open reading frame 152 (C14orf152), mRNA NM 138346 Homo saplens hypothetical protein MGC33867 (MGC33867), mRNA NM 138347 Homo sapiens zinc finger protein 551 (ZNF551), mRNA NM 138348 Homo sapiens hypothetical protein BC007706 (LOC90268), mRNA NM\_138349 Homo sapiens hypothetical protein BC004507 (LOC90313), mRNA NM\_138350 Homo sapiens hypothetical protein MGC33488 (MGC33488), mRNA NM\_138352 Homo sapiens atherin (LOC90378), mRNA NM 138355 Homo sapiens secernin 2 (Ses2), mRNA NM 138356 Homo sapiens hypothetical protein BC007586 (LOC90525), mRNA NM 138357 Homo sapiens chromosome 10 open reading frame 42 (C10orf42), mRNA NM 138358 Homo saplens hypothetical protein BC011833 (LOC90580), mRNA NM\_138360 Homo sapiens hypothetical protein BC008134 (LOC90668), mRNA NM 138361 Homo sapiens leucine rich repeat and sterile alpha motif containing 1 (LRSA NM\_138362 Homo sapiens hypothetical protein BC000919 (LOC90736), mRNA NM 138363 Homo sapiens hypothetical protein BC009518 (LOC90799), mRNA NM\_138364 Homo sapiens hypothetical protein BC004337 (LOC90826), mRNA NM\_138368 Homo sapiens hypothetical protein BC004895 (LOC91056), mRNA NM 138369 Homo sapiens family with sequence similarity 44, member B (FAM44B), mRN NM 138371 Homo sapiens hypothetical protein MGC16044 (MGC16044), mRNA NM\_138372 Homo sapiens hypothetical protein BC001610 (LOC91661), mRNA NM 138373 Homo sapiens myeloid-associated differentiation marker (MYADM), mRNA NM 138375 Homo sapiens Cdk5 and Abl enzyme substrate 1 (CABLES1), mRNA NM 138376 Homo sapiens tetratricopeptide repeat domain 5 (TTC5), mRNA NM 138379 Homo sapiens T-cell Immunoglobulin and mucin domain containing 4 (TIMD4 NM 138381 Homo sapiens hypothetical protein BC008322 (MGC15763), mRNA NM 138383 Homo sapiens hypothetical protein BC002770 (LOC92154), mRNA NM\_138384 Homo saplens shadow of prion protein (Sprn), mRNA NM\_138385 Homo sapiens hypothetical protein BC009331 (LOC92305), mRNA NM\_138386 Homo sapiens hypothetical protein BC008207 (LOC92345), mRNA NM 138387 Homo sapiens glucose 6 phosphatase, catalytic, 3 (G6PC3), mRNA NM 138389 Homo sapiens hypothetical protein BC001096 (LOC92689), mRNA NM 138390 Homo sapiens hypothetical protein BC008604 (LOC92691), mRNA NM 138391 Homo sapiens chromosome 1 open reading frame 37 (C1orf37), mRNA NM 138392 Homo sapiens hypothetical protein BC007653 (LOC92799), mRNA NM 138393 Homo sapiens chromosome 19 open reading frame 32 (C19orf32), mRNA NM 138394 Homo sapiens hypothetical protein BC008217 (LOC92906), mRNA NM 138395 Homo sapiens mitochondrial methionyl-tRNA synthetase (MetRS), mRNA NM 138396 Homo sapiens hypothetical protein BC009489 (LOC92979), mRNA NM\_138397 Homo sapiens hypothetical protein BC012317 (LOC93082), mRNA NM 138399 Homo sapiens hypothetical protein BC007772 (LOC93109), mRNA NM\_138401 Homo sapiens hypothetical protein BC011840 (LOC93343), mRNA NM 138402 Homo sapiens hypothetical protein BC004921 (LOC93349), mRNA NM 138403 Homo sapiens myosin light chain 2, precursor lymphocyte-specific (MYLC2P

NM 138408 Home sapiens chromosome 6 open reading frame 51 (C6orf51), mRNA NM 138409 Homo sapiens chromosome 6 open reading frame 117 (C6orf117), mRNA NM 138410 Homo sapiens chemokine-like factor super family 7 (CKLFSF7), transcript va NM 138412 Homo sapiens retinol dehydrogenase 13 (all-trans and 9-cis) (RDH13), mRN NM\_138413 Homo sapiens chromosome 10 open reading frame 65 (C10orf65), mRNA NM 138414 Homo sapiens hypothetical protein BC011981 (LOC112869), mRNA NM\_138415 Homo sapiens hypothetical protein BC012187 (LOC112885), mRNA NM 138416 Homo sapiens hypothetical protein BC011001 (LOC112937), mRNA NM 138417 Homo sapiens hypothetical protein BC012173 (MGC20419), mRNA NM\_138418 Homo sapiens hypothetical protein MGC15416 (MGC15416), mRNA NM 138419 Homo sapiens DUF729 domain containing 1 (DUFD1), mRNA NM\_138421 Homo sapiens hypothetical protein BC012010 (LOC113174), mRNA NM\_138422 Homo sapiens hypothetical protein BC011824 (LOC113179), mRNA NM\_138423 Homo sapiens H63 breast cancer expressed gene (H63), transcript variant 1 NM 138424 Homo sapiens kinesin family member 12 (KIF12), mRNA NM 138425 Homo sapiens likely ortholog of mouse gene rich cluster, C10 gene (GRCC1) NM 138428 Homo sapiens hypothetical protein BC011880 (LOC113444), mRNA NM\_138429 Homo sapiens claudin 15 (CLDN15), mRNA NM 138430 Homo sapiens ADP-ribosylhydrolase like 1 (ADPRHL1), transcript variant 1, I NM 138431 Homo saniens hypothetical protein BC011982 (LOC113655), mRNA NM 138432 Homo sapiens serine dehydratase-like (SDSL), mRNA NM 138433 Homo sapiens hypothetical protein BC009980 (MGC16635), mRNA NM 138434 Homo sapiens chromosome 7 open reading frame 29 (C7orf29), mRNA NM 138435 Homo sapiens hypothetical protein BC011204 (LOC113828), mRNA NM 138436 Homo sapiens hypothetical protein BC013035 (LOC114926), mRNA NM\_138437 Homo sapiens GASP2 protein (GASP2), mRNA NM\_138439 Homo sapiens hypothetical protein BC014089 (LOC114984), mRNA NM 138440 Homo sapiens hypothetical protein BC013767 (LOC114990), mRNA NM 138441 Homo sapiens chromosome 6 open reading frame 150 (C6orf150), mRNA NM 138442 Homo sapiens hypothetical protein BC013949 (LOC115098), mRNA NM\_138443 Homo sapiens colled-coll domain containing 5 (spindle associated) (CCDC5) NM\_138444 Homo sapiens potassium channel tetramerisation domain containing 12 (KC NM\_138445 Homo sapiens G protein-coupled receptor 146 (GPR146), mRNA NM 138446 Homo sapiens chromosome 7 open reading frame 30 (C7orf30), mRNA NM 138447 Homo sapiens hypothetical protein BC014000 (LOC115509), mRNA NM 138448 Homo saplens acylphosphatase 2, muscle type (ACYP2), mRNA NM 138450 Homo sapiens ADP-ribosylation factor-like 11 (ARL11), mRNA NM 138451 Homo sapiens hypothetical protein BC013151 (LOC115811), mRNA NM 138452 Homo sapiens dehydrogenase/reductase (SDR family) member 1 (DHRS1), NM 138453 Homo sapiens RAB3C, member RAS oncogene family (RAB3C), mRNA NM\_138454 Homo sapiens thioredoxin-like 6 (TXNL6), mRNA NM\_138455 Homo saplens collagen triple helix repeat containing 1 (CTHRC1), mRNA NM\_138456 Homo saplens hypothetical protein BC012330 (MGC20410). mRNA NM 138457 Homo sapiens forkhead box P4 (FOXP4), mRNA NM\_138458 Homo saplens hypothetical protein BC014022 (LOC116143), mRNA NM 138459 Homo saplens chromosome 6 open reading frame 68 (C6orf68), mRNA NM 138460 Homo sapiens chemokine-like factor super family 5 (CKLFSF5), transcript va NM 138461 Homo sapiens hypothetical protein BC013113 (LOC116211), mRNA NM 138462 Homo sapiens zinc finger, MYND domain containing 19 (ZMYND19), mRNA NM 138463 Homo sapiens hypothetical protein BC014072 (LOC116238), mRNA NM 138465 Homo sapiens GLI-Kruppel family member GLI4 (GLI4), mRNA NM 138467 Homo sapiens hypothetical protein BC009514 (LOC127253), mRNA NM\_138468 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM\_138471 Homo saplens hypothetical protein BC007540 (LOC144097), mRNA NM\_138473 Homo sapiens Sp1 transcription factor (SP1), mRNA

NM\_138476 Homo sapiens hypothetical protein MGC5987 (MGC5987), mRNA NM\_138477 Homo sapiens congenital dyserythropoietic anemia, type I (CDAN1), mRNA

NM 138479 Homo sapiens hypothetical protein BC007899 (LOC148898), mRNA NM 138482 Homo sapiens hypothetical protein BC009264 (LOC151534), mRNA NM 138484 Homo sapiens shugoshin-like 1 (S. pombe) (SGOL1), mRNA NM 138487 Homo sapiens hypothetical protein BC007882 (LOC152217), mRNA NM 138492 Homo sapiens hypothetical protein MGC21644 (MGC21644), transcript varia NM 138494 Homo sapiens vav-1 interacting Kruppel-like protein (VIK), transcript variant \* NM 138497 Homo sapiens hypothetical protein BC008050 (LOC158435), mRNA NM\_138499 Homo sapiens PWWP domain containing 2 (PWWP2), mRNA NM\_138501 Homo sapiens glycoprotein, synaptic 2 (GPSN2), mRNA NM 138551 Homo sapiens thymic stromal lymphopoietin (TSLP), transcript variant 2, mR NM 138553 Homo sapiens B-cell CLL/lymphoma 11A (zinc finger protein) (BCL11A), tran NM 138554 Homo sapiens toll-like receptor 4 (TLR4), transcript variant 1, mRNA NM 138555 Homo sapiens kinesin family member 23 (KIF23), transcript variant 1, mRNA NM 138556 Homo sapiens toll-like receptor 4 (TLR4), transcript variant 2, mRNA NM 138557 Homo saniens toll-like receptor 4 (TLR4), transcript variant 4, mRNA NM 138558 Homo saplens protein phosphatase 1, regulatory (inhibitor) subunit 8 (PPP1F NM 138559 Homo saplens B-cell CLL/lymphoma 11A (zinc finger protein) (BCL11A), tran NM 138563 Homo sapiens kallikrein 15 (KLK15), transcript variant 2, mRNA NM 138564 Homo sapiens kallikrein 15 (KLK15), transcript variant 3, mRNA NM 138565 Homo sapiens cortactin (CTTN), transcript variant 2, mRNA NM\_138566 Homo saplens glutaminase 2 (liver, mitochondrial) (GLS2), nuclear gene enc NM 138567 Homo saplens synaptotagmin VIII (SYT8), mRNA NM\_138568 Homo sapiens protein 7 transactivated by hepatitis B virus X antigen (HBxAq NM 138569 Homo sapiens chromosome 6 open reading frame 142 (C6orf142), mRNA NM 138570 Homo sapiens hypothetical protein MGC15523 (MGC15523), mRNA NM 138571 Homo saplens histidine triad nucleotide binding protein 3 (HINT3), mRNA NM\_138572 Homo sapiens taube nuss homolog (mouse) (TBN), mRNA NM 138573 Homo sapiens neurequlin 4 (LOC145957), mRNA NM 138574 Homo sapiens PWWP domain containing 1 (PWWP1), mRNA NM\_138575 Homo sapiens hypothetical protein MGC5352 (MGC5352), mRNA NM\_138576 Homo saplens B-cell CLL/lymphoma 11B (zinc finger protein) (BCL11B), tran NM 138578 Homo sapiens BCL2-like 1 (BCL2L1), nuclear gene encoding mitochondrial r NM\_138608 Homo sapiens metallophosphoesterase 1 (MPPE1), mRNA NM\_138609 Homo sapiens H2A histone family, member Y (H2AFY), transcript variant 1, t NM 138610 Homo sapiens H2A histone family, member Y (H2AFY), transcript variant 3, I NM 138612 Homo sapiens hyaluronan synthase 3 (HAS3), transcript variant 2, mRNA NM 138614 Homo sapiens DEAH (Asp-Glu-Ala-His) box polypeptide 30 (DHX30), transci NM\_138615 Homo sapiens DEAH (Asp-Glu-Ala-His) box polypeptide 30 (DHX30), transcr NM 138616 Homo sapiens Rhesus blood group. CcEe antigens (RHCE), transcript variar NM 138617 Homo sapiens Rhesus blood group, CoEe antigens (RHCE), transcript variar NM 138618 Home sapiens Rhesus blood group, CcEe antigens (RHCE), transcript variar NM\_138619 Homo saplens golgl associated, gamma adaptin ear containing, ARF binding NM\_138620 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 31 (DDX31), transc NM 138621 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM 138622 Homo saplens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM\_138623 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM\_138624 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript vans NM 138625 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM 138626 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM\_138627 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM 138632 Homo sapiens Tara-like protein (HRIHFB2122), transcript variant 2, mRNA NM 138633 Homo sapiens A kinase (PRKA) anchor protein 7 (AKAP7), transcript variant NM 138634 Homo sapiens microseminoprotein, beta- (MSMB), transcript variant PSP57, NM\_138635 Homo sapiens H2A histone family, member V (H2AFV), transcript variant 2, i NM 138636 Homo sapiens toll-like receptor 8 (TLR8), transcript variant 2, mRNA NM 138637 Homo saplens dudulin 2 (TSAP6), mRNA

NM 138638 Homo sapiens cofilin 2 (muscle) (CFL2), transcript variant 2. mRNA

NM\_138639 Homo sapiens BCL2-like 12 (proline rich) (BCL2L12), transcript variant 1, mF NM 138640 Homo saplens golgi associated, gamma adaptin ear containing, ARF binding NM\_138643 Homo sapiens calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrou NM\_138644 Homo sapiens calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrou NM\_138687 Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type II, beta (PIP5 NM\_138688 Homo sapiens toll-like receptor 9 (TLR9), transcript variant E, mRNA NM 138691 Homo sapiens transmembrane channel-like 1 (TMC1), mRNA NM 138693 Homo sapiens Kruppel-like factor 14 (KLF14), mRNA NM\_138694 Homo sapiens polycystic kidney and hepatic disease 1 (autosomal recessive NM\_138697 Homo sapiens taste receptor, type 1, member 1 (TAS1R1), transcript variant NM\_138698 Homo sapiens prematurely terminated mRNA decay factor-like (LOC91431). NM 138699 Homo sapiens hypothetical protein BC006130 (LOC93622), mRNA NM\_138700 Homo sapiens tripartite motif-containing 40 (TRIM40), mRNA NM\_138701 Homo sapiens chromosome 7 open reading frame 11 (C7orf11), mRNA NM\_138702 Homo sapiens melanoma antigen, family C, 3 (MAGEC3), transcript variant 1 NM\_138703 Homo sapiens melanoma antigen, family E, 2 (MAGEE2), mRNA NM 138704 Homo sapiens necdin-like 2 (NDNL2), mRNA NM 138705 Homo sapiens calglandulin-like protein (CAGLP), mRNA NM 138706 Homo sapiens beta-1,3-N-acetylglucosaminyltransferase protein (IMAGE:490 NM\_138707 Homo sapiens B-cell CLL/lymphoma 7B (BCL7B), transcript variant 2, mRNA NM\_138709 Homo saplens DAB2 Interacting protein (DAB2IP), mRNA NM\_138711 Homo sapiens peroxisome proliferative activated receptor, gamma (PPARG) NM 138712 Homo sapiens peroxisome proliferative activated receptor, gamma (PPARG) NM\_138713 Homo sapiens nuclear factor of activated T-cells 5, tonicity-responsive (NFA\* NM 138714 Homo sapiens nuclear factor of activated T-cells 5, tonicity-responsive (NFA" NM\_138715 Homo sapiens macrophage scavenger receptor 1 (MSR1), transcript variant NM\_138716 Homo sapiens macrophage scavenger receptor 1 (MSR1), transcript variant NM\_138717 Homo sapiens palmitoyl-protein thioesterase 2 (PPT2), transcript variant 2, n NM 138718 Homo sapiens solute carrier family 26, member 8 (SLC26A8), transcript variety NM\_138720 Homo sapiens histone 1, H2bd (HIST1H2BD), transcript variant 2, mRNA NM 138722 Homo sapiens BCL2-like 14 (apoptosis facilitator) (BCL2L14), transcript variation NM\_138723 Homo sapiens BCL2-like 14 (apoptosis facilitator) (BCL2L14), transcript varie NM\_138724 Homo sapiens BCL2-like 14 (apoptosis facilitator) (BCL2L14), transcript variation NM\_138726 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 13 NM\_138727 Homo sapiens suppression of tumorigenicity 7 like (ST7L), transcript variant NM\_138728 Homo saplens suppression of tumorigenicity 7 like (ST7L), transcript variant NM\_138729 Homo sapiens suppression of tumorigenicity 7 like (ST7L), transcript variant NM 138730 Homo sapiens high mobility group nucleosomal binding domain 3 (HMGN3), NM 138731 Homo sapiens mirror-image polydactyly 1 (MIPOL1), mRNA NM 138732 Homo saplens neurexin 2 (NRXN2), transcript variant alpha-2, mRNA NM\_138733 Homo sapiens phosphoglycerate kinase 2 (PGK2), mRNA NM\_138734 Homo sapiens neurexin 2 (NRXN2), transcript variant beta, mRNA NM\_138735 Homo sapiens neurexin 1 (NRXN1), transcript variant beta, mRNA NM\_138736 Homo saplens guanine nucleotide binding protein (G protein), alpha activatin NM 138737 Homo sapiens hephaestin (HEPH), transcript variant 1, mRNA NM 138738 Homo sapiens SH2 domain containing phosphatase anchor protein 1 (SPAP NM 138739 Homo sapiens SH2 domain containing phosphatase anchor protein 1 (SPAP NM 138740 Homo sapiens NICE-3 protein (NICE-3), mRNA NM 138761 Homo sapiens BCL2-associated X protein (BAX), transcript variant alpha, mf NM 138762 Homo sapiens BCL2-associated X protein (BAX), transcript variant gamma, r NM 138763 Homo sapiens BCL2-associated X protein (BAX), transcript variant delta, mR NM 138764 Homo sapiens BCL2-associated X protein (BAX), transcript variant epsilon, n NM\_138765 Homo sapiens BCL2-associated X protein (BAX), transcript variant sigma, m NM\_138766 Homo sapiens peptidylglycine alpha-amidating monooxygenase (PAM), trans NM 138768 Homo sapiens myeloma overexpressed gene (in a subset of t(11:14) positive NM 138769 Homo sapiens ras homolog gene family, member T2 (RHOT2), mRNA

NM 138770 Homo sapiens hypothetical protein BC016861 (LOC90557), mRNA

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NM 138771 Homo sapiens alpha-1,3(6)-mannosylglycoprotein beta-1,6-N-acetyl-glucosa NM 138773 Homo sapiens hypothetical protein BC017169 (LOC91137), mRNA NM 138774 Homo sapiens chromosome 19 open reading frame 22 (C19orf22), mRNA NM 138775 Homo sapiens hypothetical protein BC015183 (LOC91801), mRNA NM 138777 Homo sapiens mitochondrial ribosome recycling factor (MRRF), transcript va NM 138778 Homo sapiens chromosome 9 open reading frame 112 (C9orf112), mRNA NM 138779 Homo sapiens hypothetical protein BC015148 (LOC93081), mRNA NM\_138780 Homo sapiens synaptotagmin-like 5 (SYTL5), mRNA NM\_138781 Homo sapiens similar to envelope protein (LOC113386), mRNA NM\_138783 Homo sapiens zinc finger protein Zip67 (ZIP67), mRNA NM\_138784 Homo sapiens hypothetical protein BC014341 (LOC116123), mRNA NM 138785 Homo sapiens chromosome 6 open reading frame 72 (C6orf72), mRNA NM 138786 Homo sapiens hypothetical protein BC014339 (LOC116441), mRNA NM 138787 Homo sapiens hypothetical protein BC009561 (LOC119710), mRNA NM 138788 Homo sapiens hypothetical protein BC016153 (LOC120224), mRNA NM 138789 Homo sapiens hypothetical protein BC019238 (LOC120379), mRNA NM 138790 Homo sapiens hypothetical protein BC015003 (LOC122618), mRNA NM 138791 Homo sapiens chromosome 14 open reading frame 148 (C14orf148), mRNA NM 138792 Homo sapiens senescence downregulated leo1-like (LOC123169), mRNA NM\_138793 Homo sapiens ectonucleoside triphosphate diphosphohydrolase 8 (ENTPD8) NM 138794 Homo sapiens lysophospholipase-like 1 (LYPLAL1), mRNA NM\_138795 Homo sapiens ADP-ribosylation factor-like 10B (ARL10B), mRNA NM 138796 Homo sapiens hypothetical protein BC014608 (LOC128153), mRNA NM 13.8797 Homo sapiens hypothetical protein BC014641 (LOC129138), mRNA NM 13.8798 Homo sapiens hypothetical protein BC018453 (LOC129531), mRNA NM\_138799 Homo saplens O-acyltransferase (membrane bound) domain containing 2 (O NM 138800 Homo sapiens tripartite motif-containing 43 (TRIM43), mRNA NM 138801 Homo sapiens galactose mutarotase (aldose 1-epimerase) (GALM), mRNA NM 138802 Homo sapiens hypothetical protein BC018415 (LOC130617), mRNA NM 138803 Homo saplens hypothetical protein BC015395 (LOC130940), mRNA NM 138804 Homo sapiens hypothetical protein BC014602 (LOC130951), mRNA NM\_138805 Homo sapiens family with sequence similarity 3, member D (FAM3D), mRNA NM\_138806 Homo sapiens MOX2 receptor (MOX2R), transcript variant 1, mRNA NM 13 8807 Homo sapiens hypothetical protein BC015088 (MGC16471), mRNA NM\_138808 Homo sapiens hypothetical protein BC015210 (LOC132200), mRNA NM 138809 Homo sapiens hypothetical protein BC001573 (LOC134147), mRNA NM\_138810 Homo saplens T-cell activation GTPase activating protein (TAGAP), transcrip NM\_138811 Homo sapiens chromosome 7 open reading frame 31 (C7orf31), mRNA NM 138812 Homo sapiens hypothetical protein BC019250 (LOC143241), mRNA NM 138813 Homo sapiens ATPase, Class I, type 8B, member 3 (ATP8B3), mRNA NM 138814 Homo saplens GS2 llke (LOC150379), mRNA NM\_138815 Homo saplens hypothetical protein BC018070 (LOC151871), mRNA NM 138817 Homo sapiens solute carrier family 7, (cationic amino acid transporter, y+ sys NM 138818 Homo sapiens chromosome 9 open reading frame 65 (C9orf65), mRNA NM 138819 Homo sapiens hypothetical protein BC017868 (LOC159091), mRNA NM 138820 Homo sapiens hypothetical protein MGC2198 (MGC2198), mRNA NM\_138821 Homo sapiens peptidylglycine alpha-amidating monocxygenase (PAM), trans NM\_138822 Homo sapiens peptidylglycine alpha-amidating monooxygenase (PAM), trans NM 138923 Homo sapiens TAF1 RNA polymerase II, TATA box binding protein (TBP)-as NM\_138924 Homo sapiens guanidinoacetate N-methyltransferase (GAMT), transcript vari NM 138925 Homo sapiens SON DNA binding protein (SON), transcript variant a, mRNA NM 138926 Homo sapiens SON DNA binding protein (SON), transcript variant c, mRNA NM 138927 Homo sapiens SON DNA binding protein (SON), transcript variant f, mRNA NM\_138928 Homo sapiens molybdenum cofactor synthesis 1 (MOCS1), transcript variant NM 138929 Homo sapiens diablo homolog (Drosophila) (DIABLO), nuclear gene encodin NM 138930 Homo sapiens diablo homolog (Drosophila) (DIABLO), nuclear gene encodin

NM 138931 Homo sapiens B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6), transc

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NM 138932 Homo sapiens apobec-1 complementation factor (ACF), transcript variant 2, NM 138933 Homo sapiens apobec-1 complementation factor (ACF), transcript variant 3, NM\_138934 Homo sapiens palmitoyl-protein thioesterase 2 (PPT2), transcript variant 3, n NM\_138937 Homo sapiens pancreatitis-associated protein (PAP), transcript variant 3, mF NM\_138938 Homo sapiens pancreatitis-associated protein (PAP), transcript variant 2, mF NM 138939 Homo sapiens MOX2 receptor (MOX2R), transcript variant 2, mRNA NM\_138940 Homo sapiens MOX2 receptor (MOX2R), transcript variant 3, mRNA NM\_138957 Homo sapiens mitogen-activated protein kinase 1 (MAPK1), transcript varian NM\_138958 Homo sapiens autocrine motility factor receptor (AMFR), transcript variant 2, NM\_138959 Homo sapiens vang-like 1 (van gogh, Drosophila) (VANGL1), mRNA NM 138960 Homo sapiens TGFB-induced factor 2-like, X-linked (TGIF2LX), mRNA NM 138961 Homo sapiens endothelial cell adhesion molecule (ESAM), mRNA NM\_138962 Homo sapiens musashi homolog 2 (Drosophila) (MSI2), transcript variant 1, 1 NM\_138963 Homo sapiens ribosomal protein S4, Y-linked 2 (RPS4Y2), mRNA NM 138964 Homo sapiens G protein-coupled receptor 73 (GPR73), mRNA NM\_138966 Homo sapiens neuropilin (NRP) and tolloid (TLL)-like 1 (NETO1), transcript v NM 138967 Homo sapiens secretory carrier membrane protein 5 (SCAMP5), mRNA NM\_138969 Homo sapiens retinal short chain dehydrogenase reductase (RDH-E2), mRN NM\_138970 Homo sapiens neurexin 3 (NRXN3), transcript variant beta, mRNA NM 138971 Homo saplens beta-site APP-cleaving enzyme 1 (BACE1), transcript variant NM 138972 Homo sapiens beta-site APP-cleaving enzyme 1 (BACE1), transcript variant NM\_138973 Homo sapiens beta-site APP-cleaving enzyme 1 (BACE1), transcript variant NM\_138980 Homo sapiens mitogen-activated protein kinase 10 (MAPK10), transcript van NM 138981 Homo sapiens mitogen-activated protein kinase 10 (MAPK10), transcript vari NM\_138982 Homo sapiens mitogen-activated protein kinase 10 (MAPK10), transcript vari NM 138983 Homo saplens oligodendrocyte transcription factor 1 (OLIG1), mRNA NM\_138991 Homo sapiens beta-site APP-cleaving enzyme 2 (BACE2), transcript variant NM 138992 Homo sapiens beta-site APP-cleaving enzyme 2 (BACE2), transcript variant NM\_138993 Homo sapiens mitogen-activated protein kinase 11 (MAPK11), transcript vari NM\_138994 Homo saplens contactin associated protein-like 4 (CNTNAP4), transcript vari NM 138995 Homo sapiens myosin IIIB (MYO3B), mRNA NM\_138996 Homo sapiens contactin associated protein-like 5 (CNTNAP5), transcript vari NM 138998 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 39 (DDX39), transc NM\_138999 Homo sapiens neuropilin (NRP) and tolloid (TLL)-like 1 (NETO1), transcript v NM\_139002 Homo sapiens hemochromatosis (HFE), transcript variant 2, mRNA NM\_139003 Homo sapiens hemochromatosis (HFE), transcript variant 3, mRNA NM\_139004 Homo sapiens hemochromatosis (HFE), transcript variant 4, mRNA NM\_139005 Homo sapiens hemochromatosis (HFE), transcript variant 5, mRNA NM\_139006 Homo sapiens hemochromatosis (HFE), transcript variant 6, mRNA NM\_139007 Homo sapiens hemochromatosis (HFE), transcript variant 7, mRNA NM\_139008 Homo sapiens hemochromatosis (HFE), transcript variant 8, mRNA NM 139009 Homo saplens hemochromatosis (HFE), transcript variant 9, mRNA NM\_139010 Homo sapiens hemochromatosis (HFE), transcript variant 10, mRNA NM\_139011 Homo sapiens hemochromatosis (HFE), transcript variant 11, mRNA NM\_139012 Homo sapiens mitogen-activated protein kinase 14 (MAPK14), transcript vari NM\_139013 Homo sapiens mitogen-activated protein kinase 14 (MAPK14), transcript vari NM\_139014 Homo saplens mitogen-activated protein kinase 14 (MAPK14), transcript vari NM\_139015 Homo sapiens signal peptide peptidase 3 (SPPL3), mRNA NM\_139016 Homo sapiens hypothetical gene LOC128439 (LOC128439), mRNA NM\_139017 Homo sapiens interleukin 31 receptor A (IL31RA), mRNA NM\_139018 Homo sapiens NK inhibitory receptor precursor (NKIR), mRNA NM 139021 Homo sapiens extracellular signal-regulated kinase 8 (ERK8), mRNA NM 139022 Homo sapiens pan-hematopoietic expression (PHEMX), transcript variant 1, NM 139024 Homo sapiens pan-hematopoietic expression (PHEMX), transcript variant 3, NM\_139025 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 139026 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 139027 Homo sapiens a disintegrin-like and metalloprotease (reprotysin type) with th

NM\_139028 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_139030 Homo sapiens CD151 antigen (CD151), transcript variant 2, mRNA NM\_139032 Homo sapiens mitogen-activated protein kinase 7 (MAPK7), transcript varian NM\_139033 Homo sapiens mitogen-activated protein kinase 7 (MAPK7), transcript varian NM\_139034 Homo sapiens mitogen-activated protein kinase 7 (MAPK7), transcript varian NM\_139035 Homo saplens SWI/SNF related, matrix associated, actin dependent regulator NM\_139045 Homo sapiens SWI/SNF related, matrix associated, actin dependent regulator NM\_139046 Homo sapiens mitogen-activated protein kinase 8 (MAPK8), transcript varian NM 139047 Homo sapiens mitogen-activated protein kinase 8 (MAPK8), transcript varian NM 139048 Homo sapiens SWI/SNF related, matrix associated, actin dependent regulator NM 139049 Homo sapiens mitogen-activated protein kinase 8 (MAPK8), transcript varian NM\_139053 Homo sapiens EPS8-like 3 (EPS8L3), transcript variant 1, mRNA NM\_139054 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_139055 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_139056 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 139057 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM\_139058 Homo sapiens aristaless related homeobox (ARX), mRNA NM\_139062 Homo sapiens casein kinase 1, delta (CSNK1D), transcript variant 2, mRNA NM\_139067 Homo sapiens SWI/SNF related, matrix associated, actin dependent regulate NM\_139068 Homo sapiens mitogen-activated protein kinase 9 (MAPK9), transcript varian NM 139069 Homo sapiens mitogen-activated protein kinase 9 (MAPK9), transcript varian NM 139070 Homo saplens mitogen-activated protein kinase 9 (MAPK9), transcript varian NM\_139071 Homo sapiens SWI/SNF related, matrix associated, actin dependent regulate NM\_139072 Homo sapiens delta-notch-like EGF repeat-containing transmembrane (DNE NM\_139073 Homo sapiens spermatogenesis associated 3 (SPATA3), mRNA NM\_139074 Homo sapiens defensin, beta 127 (DEFB127), mRNA NM\_139075 Homo sapiens two pore segment channel 2 (TPCN2), mRNA NM\_139076 Homo sapiens hypothetical protein FLJ13614 (FLJ13614), mRNA NM\_139078 Homo sapiens mitogen-activated protein kinase-activated protein kinase 5 (A) NM\_139118 Homo sapiens YY1 associated protein (YAP), transcript variant 2, mRNA NM 139119 Homo sapiens YY1 associated protein (YAP), transcript variant 3, mRNA NM\_139120 Homo sapiens YY1 associated protein (YAP), transcript variant 4, mRNA NM 139121 Homo sapiens YY1 associated protein (YAP), transcript variant 5, mRNA NM\_139122 Homo sapiens TAF6 RNA polymerase II, TATA box binding protein (TBP)-as NM 139123 Homo sapiens TAF6 RNA polymerase II, TATA box binding protein (TBP)-as NM 139124 Homo sapiens mitogen-activated protein kinase 8 interacting protein 2 (MAPI NM 139125 Homo sapiens mannan-binding lectin serine protease 1 (C4/C2 activating co-NM\_139126 Homo sapiens peptidylprolyl (somerase (cyclophilin)-like 4 (PPIL4), mRNA NM 139131 Homo sapiens nucleoporin 98kDa (NUP98), transcript variant 2, mRNA NM 139132 Homo sapiens nucleoporin 98kDa (NUP98), transcript variant 4, mRNA NM 139135 Homo sapiens AT rich interactive domain 1A (SWI- like) (ARID1A), transcript NM\_139136 Homo sapiens potassium voltage-gated channel, Shaw-related subfamily, me NM 139137 Homo sapiens potassium voltage-gated channel, Shaw-related subfamily, mo NM 139155 Home sapiens a disintegrin-like and metalloprotease (reprolysin type) with the NM 139156 Homo sapiens adenosine monophosphate deaminase 2 (isoform L) (AMPD2 NM 139157 Home sapiens suppression of tumorigenicity 5 (ST5), transcript variant 2, mF NM\_139158 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM\_139159 Homo sapiens dipeptidylpeptidase 9 (DPP9), mRNA NM\_139160 Homo sapiens novel 58.3 KDA protein (LOC91614), mRNA NM\_139161 Homo sapiens crumbs homolog 3 (Drosophila) (CRB3), transcript variant 2, r NM 139162 Homo sapiens Smith-Magenis syndrome chromosome region, candidate 7 (5 Homo saplens amyotrophic lateral sclerosis 2 (Juvenile) chromosome region, NM 139163 NM 139164 Homo sapiens START domain containing 4, sterol regulated (STARD4), mR1 NM 139165 Homo sapiens retinoic acid early transcript 1E (RAET1E), mRNA NM\_139166 Homo sapiens striated muscle activator of Rho-dependent signaling (STARS

NM\_139169 Homo sapiens TruB pseudouridine (psi) synthase homolog 1 (E. coli) (TRUB NM\_139170 Homo sapiens hypothetical protein AF447587 (LOC146562), mRNA NM 139171 Homo sapiens START domain containing 6 (STARD6), mRNA NM\_139172 Homo sapiens MDAC1 (MDAC1), mRNA NM 139173 Homo sapiens CG10806-like (LOC150159). mRNA NM 139174 Homo sapiens testis nuclear RNA-binding protein-like (LOC161931), mRNA NM 139175 Homo sapiens ring finger protein 133 (RNF133), mRNA NM\_139176 Homo sapiens NACHT, leucine rich repeat and PYD containing 7 (NALP7), ti NM\_139177 Homo sapiens solute carrier family 39 (metal ion transporter), member 11 (SI NM\_139178 Homo sapiens prostate cancer antigen-1 (DEPC-1), mRNA NM 139179 Homo sapiens KCCR13L (LOC221955), mRNA NM 139181 Homo sapiens centaurin, delta 2 (CENTD2), transcript variant 1, mRNA NM 139182 Homo sapiens centaurin, delta 1 (CENTD1), transcript variant 2, mRNA NM 139199 Homo sapiens bromodomain containing 8 (BRD8), transcript variant 2, mRN/ NM 139201 Homo sapiens G protein-coupled receptor kinase interactor 2 (GIT2), transcr NM\_139202 Homo sapiens megalencephallc leukoencephalopathy with subcortical cysts NM\_139204 Homo sapiens EPS8-like 1 (EPS8L1), transcript variant 3, mRNA NM\_139205 Homo sapiens histone deacetylase 5 (HDAC5), transcript variant 2, mRNA NM\_139207 Homo saplens nucleosome assembly protein 1-like 1 (NAP1L1), transcript vs NM\_139208 Homo sapiens mannan-binding lectin serine protease 2 (MASP2), transcript NM\_139209 Homo sapiens G protein-coupled receptor kinase 7 (GRK7), mRNA NM\_139211 Homo sapiens homeodomain-only protein (HOP), transcript variant 2, mRNA NM\_139212 Homo sapiens homeodomaln-only protein (HOP), transcript variant 3, mRNA NM\_139214 Homo sapiens TGFB-induced factor 2-like, Y-linked (TGIF2LY), mRNA NM 139215 Homo sapiens TAF15 RNA polymerase II, TATA box binding protein (TBP)-a NM 139235 Homo saplens nucleolar protein family 6 (RNA-associated) (NOL6), transcrip NM 139238 Homo sapiens ADAMTS-like 1 (ADAMTSL1), transcript variant 1, mRNA NM 139239 Homo sapiens T-cell activation NFKB-like protein (TA-NFKBH), mRNA NM 139240 Homo sapiens LOC92346 (LOC92346), mRNA NM\_139241 Homo sapiens FGD1 family, member 4 (FGD4), mRNA NM\_139242 Homo saplens methionyl-tRNA formyltransferase, mitochondrial (MtFMT), mI NM\_139243 Homo sapiens testis nuclear RNA-binding protein (Tenr), mRNA NM\_139244 Homo sapiens syntaxin binding protein 5 (tomosyn) (STXBP5), mRNA NM\_139245 Homo saplens protein phosphatase 1 (formerly 2C)-like (PPM1L), mRNA NM 139246 Homo sapiens chromosome 9 open reading frame 97 (C9orf97), mRNA NM 139247 Homo sapiens adenylate cyclase 4 (ADCY4), mRNA NM 139248 Homo sapiens lipase, member H (LIPH), mRNA NM 139249 Homo saplens membrane-spanning 4-domains, subfamily A, member 6E (MI NM\_139250 Homo sapiens cancer/testis antigen 1A (CTAG1A), mRNA NM\_139264 Homo sapiens ADAMTS-like 1 (ADAMTSL1), transcript variant 3, mRNA NM\_139265 Homo sapiens EH-domain containing 4 (EHD4), mRNA NM\_139266 Homo sapiens signal transducer and activator of transcription 1, 91kDa (STA NM\_139267 Homo sapiens START domain containing 7 (STARD7), transcript variant 2, n NM\_139273 Homo sapiens cysteinyl-tRNA synthetase (CARS), transcript variant 1, mRN/ NM\_139274 Homo sapiens acetyl-Coenzyme A synthetase 2 (ADP forming) (ACAS2), tra NM\_139275 Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), nuclear gene end NM 139276 Homo sapiens signal transducer and activator of transcription 3 (acute-phase NM 139277 Homo sapiens kallikrein 7 (chymotryptic, stratum comeum) (KLK7), transcrip NM 139278 Homo sapiens leucine-rich repeat LGI family, member 3 (LGI3), mRNA NM 139279 Homo sapiens multiple coagulation factor deficiency 2 (MCFD2), mRNA NM 139280 Homo sapiens ORM1-like 3 (S. cerevisiae) (ORMDL3), mRNA Homo sapiens WD repeat domain 36 (WDR36), mRNA NM 139281 NM\_139282 Homo sapiens paired-like homeobox protein OTEX (OTEX), mRNA

NM\_139283 Homo sapiens T-cell activation protein phosphatase 2C (TA-PP2C), mRNA NM 139284 Homo sapiens leucine-rich repeat LGI family, member 4 (LGI4), mRNA NM 139285 Homo sapiens growth arrest-specific 2 like 2 (GAS2L2), mRNA

NM\_139286 Homo sapiens cell division cycle 26 (CDC26), mRNA

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NM 139289 Homo sapiens A kinase (PRKA) anchor protein 4 (AKAP4), transcript variant NM 139290 Homo sapiens angiopoietin 1 (ANGPT1), transcript variant 2, mRNA NM 139312 Homo sapiens YME1-like 1 (S. cerevisiae) (YME1L1), nuclear gene encoding NM 139313 Homo sapiens YME1-like 1 (S. cerevisiae) (YME1L1), nuclear gene encoding NM 139314 Homo sapiens angiopoietin-like 4 (ANGPTL4), transcript variant 1, mRNA NM 139315 Home sapiens TAF6 RNA polymerase II. TATA box binding protein (TBP)-as NM 139316 Homo sapiens amphiphysin (Stiff-Man syndrome with breast cancer 128kDa NM 139317 Homo sapiens baculoviral IAP repeat-containing 7 (livin) (BIRC7), transcripts NM\_139318 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I NM\_139319 Homo sapiens solute carrier family 17 (sodium-dependent inorganic phospha NM\_139320 Homo sapiens CHRNA7 (cholinergic receptor, nicotinic, alpha polypeptide 7, NM 139321 Homo sapiens attractin (ATRN), transcript variant 1, mRNA NM 139322 Homo sapiens attractin (ATRN), transcript variant 2, mRNA NM 139323 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NM\_139343 Homo sapiens bridging integrator 1 (BIN1), transcript variant 1, mRNA NM\_139344 Homo sapiens bridging integrator 1 (BIN1), transcript variant 2, mRNA NM\_139345 Homo sapiens bridging integrator 1 (BIN1), transcript variant 3, mRNA NM 139346 Homo saplens bridging integrator 1 (BIN1), transcript variant 4, mRNA NM\_139347 Homo sapiens bridging integrator 1 (BIN1), transcript variant 5, mRNA NM\_139348 Homo sapiens bridging integrator 1 (BIN1), transcript variant 6, mRNA NM 139349 Homo sapiens bridging integrator 1 (BIN1), transcript variant 7, mRNA NM 139350 Homo saplens bridging Integrator 1 (BIN1), transcript variant 9, mRNA NM\_139351 Homo saplens bridging integrator 1 (BIN1), transcript variant 10, mRNA NM\_139352 Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polyn NM 139353 Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polyn NM\_139354 Homo sapiens megakaryocyte-associated tyrosine kinase (MATK), transcript NM 139355 Homo sapiens megakaryocyte-associated tyrosine kinase (MATK), transcript NM 144488 Homo sapiens regulator of G-protein signalling 3 (RGS3), transcript variant 6 NM 144489 Homo saplens regulator of G-protein signalling 3 (RGS3), transcript variant 5 NM 144490 Homo sapiens A kinase (PRKA) anchor protein 11 (AKAP11), transcript varia NM 144492 Homo sapiens claudin 14 (CLDN14), transcript variant 1, mRNA NM\_144494 Homo sapiens polyglutamine binding protein 1 (PQBP1), mRNA NM\_144495 Homo saplens polyglutamine binding protein 1 (PQBP1), mRNA NM\_144497 Homo sapiens A kinase (PRKA) anchor protein (gravin) 12 (AKAP12), transc NM 144498 Homo saplens oxysterol binding protein-like 2 (OSBPL2), transcript variant 2 NM\_144499 Homo saplens guanine nucleotide binding protein (G protein), alpha transduc NM 144501 Homo saplens F11 receptor (F11R), transcript variant 2, mRNA NM 144502 Homo sapiens F11 receptor (F11R), transcript variant 3, mRNA NM 144503 Homo sapiens F11 receptor (F11R), transcript variant 4, mRNA NM 144504 Homo saplens F11 receptor (F11R), transcript variant 5, mRNA NM 144505 Homo sapiens kallikrein 8 (neuropsin/ovasin) (KLK8), transcript variant 2, mF NM\_144506 Homo sapiens kallikrein 8 (neuropsin/ovasin) (KLK8), transcript variant 3, mF NM\_144507 Homo sapiens kallikrein 8 (neuropsin/ovasin) (KLK8), transcript variant 4, mF NM\_144508 Homo sapiens AF15q14 protein (AF15Q14), mRNA NM\_144563 Homo sapiens ribose 5-phosphate isomerase A (ribose 5-phosphate epimera NM\_144564 Homo sapiens solute carrier family 39 (zinc transporter), member 3 (SLC39A NM 144565 Homo sapiens homolog of Drosophila Numb-interacting protein (NIP), mRNA NM 144567 Homo sapiens similar to RIKEN cDNA 2610307I21 (LOC90806), mRNA NM 144568 Homo sapiens chromosome 14 open reading frame 9 (C14orf9), mRNA NM 144569 Homo sapiens hypothetical protein FLJ25348 (FLJ25348), mRNA NM 144570 Homo sapiens chromosome 16 open reading frame 34 (C16orf34), mRNA NM 144571 Homo sapiens CCR4-NOT transcription complex, subunit 6-like (CNOT6L), n NM 144573 Homo sapiens nexilin (F actin binding protein) (NEXN), mRNA NM\_144574 Homo sapiens WD repeat domain 20 (WDR20), transcript variant 2, mRNA NM 144575 Homo sapiens calpain 13 (CAPN13), mRNA NM\_144576 Homo sapiens hypothetical protein FLJ32452 (FLJ32452), mRNA NM 144577 Homo sapiens hypothetical protein FLJ32926 (FLJ32926), mRNA

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NM 144580 Homo sapiens kidney predominant protein NCU-G1 (MGC31963), mRNA NM 144581 Homo sapiens chromosome 14 open reading frame 149 (C14orf149), mRNA NM 144582 Homo sapiens testis expressed sequence 261 (TEX261), mRNA NM 144583 Homo sapiens ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C isof NM 144584 Homo sapiens hypothetical protein FLJ30525 (FLJ30525), mRNA NM\_144585 Homo sapiens solute carrier family 22 (organic anion/cation transporter), mei NM 144586 Homo sapiens hypothetical protein MGC29643 (MGC29643), mRNA NM\_144587 Homo sapiens chromosome 10 open reading frame 87 (C10orf87), mRNA NM\_144588 Homo sapiens zinc finger, FYVE domain containing 27 (ZFYVE27), transcrip NM\_144589 Homo sapiens catechol-O-methyltransferase domain containing 1 (COMTD1 NM 144590 Hormo sapiens ankvrin repeat domain 22 (ANKRD22), mRNA NM 144591 Homo sapiens chromosome 10 open reading frame 32 (C10orf32), mRNA NM 144593 Homo sapiens Ras homolog enriched in brain like 1 (RHEBL1), mRNA NM 144594 Homo sapiens hypothetical protein FLJ32942 (FLJ32942), mRNA NM 144595 Homo sapiens hypothetical protein FLJ30046 (FLJ30046), mRNA NM 144596 Ho mo saplens tetratricopeptide repeat domain 8 (TTC8), transcript variant 3, NM 144597 Homo sapiens hypothetical protein MGC29937 (MGC29937), mRNA NM\_144598 Homo sapiens leucine rich repeat containing 28 (LRRC28), mRNA NM\_144599 Homo saplens non-imprinted in Prader-Willi/Angelman syndrome 1 (NIPA1), NM\_144600 Ho mo sapiens hypothetical protein FLJ31153 (FLJ31153), mRNA NM 144601 Ho mo sapiens chemokine-like factor super family 3 (CKLFSF3), transcript va NM 144602 Homo sapiens hypothetical protein MGC32905 (MGC33367), mRNA NM 144603 Ho mo sapiens NADPH oxidase organizer 1 (NOXO1), transcript variant a, mi NM\_144604 Homo sapiens hypothetical protein BC001584 (LOC124245), mRNA NM\_144605 Homo sapiens hypothetical protein FLJ25410 (FLJ25410), mRNA NM 144606 Homo sapiens folliculin (BHD), transcript variant 2, mRNA

NM\_144578 Ho mo sapiens chromosome 14 open reading frame 32 (C14orf32), mRNA

NM 144579 Homo sapiens sideroflexin 5 (SFXN5), mRNA

NM 144607 Homo sapiens hypothetical protein FLJ32499 (FLJ32499), mRNA NM 144608 Homo sapiens hypothetical protein MGC39389 (FLJ32384), mRNA

NM\_144609 Homo sapiens hypothetical protein FLJ31795 (FLJ31795), mRNA NM\_144610 Homo sapiens hypothetical protein FLJ25006 (FLJ25006), mRNA NM 144611 Homo saplens hypothetical protein MGC32124 (MGC32124), mRNA

NM\_144612 Homo saplens lipoxygenase homology domains 1 (LOXHD1), mRNA NM\_144613 Homo sapiens cytochrome c oxidase subunit VIb, testes-specific (COXVIB2) NM 144614 Homo sapiens methyl-CpG binding domain protein 3-like 2 (MBD3L2), mRN/

NM 144615 Homo sapiens hypothetical protein MGC23244 (MGC23244), mRNA NM\_144616 Ho mo saplens homolog of mouse skeletal muscle sarcoplasmic reticulum pre

NM\_144617 Homo sapiens heat shock protein, alpha-crystallin-related, B6 (HSPB6), mR1 NM 144618 Homo sapiens hypothetical protein MGC29891 (MGC29891), mRNA NM 144620 Homo sapiens hypothetical protein MGC14816 (MGC14816), mRNA

NM\_144621 Ho mo sapiens zinc finger and BTB domain containing 8 (ZBTB8), mRNA NM\_144622 Homo sapiens hypothetical protein FLJ32934 (FLJ32934), mRNA

NM\_144623 Homo sapiens hypothetical protein FLJ32784 (FLJ32784), mRNA NM 144624 Homo sapiens kinase interacting with leukemla-associated gene (stathmin) ( NM 144625 Homo sapiens hypothetical protein FLJ32978 (FLJ32978), mRNA

NM 144626 Homo sapiens hypothetical protein MGC17299 (MGC17299), mRNA NM\_144627 Homo sapiens SSTK-interacting protein (SSTK-IP), mRNA

NM\_144628 Homo sapiens chromosome 20 open reading frame 140 (C20orf140), mRNA NM 144629 Homo sapiens chromosome 2 open reading frame 11 (C2orf11), mRNA NM 144631 Homo sapiens zinc finger protein 513 (ZNF513), mRNA

NM 144632 Homo sapiens hypothetical protein FLJ30294 (FLJ30294), mRNA

NM 144633 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I

NM 144634 Ho mo sapiens lysozyme-like 4 (LYZL4), mRNA NM\_144635 Ho mo sapiens hypothetical protein MGC21688 (MGC21688), mRNA

NM 144636 Ho mo sapiens coiled-coil-helix-coiled-coil-helix domain containing 4 (CHCHE

NM 144637 Homo sapiens zinc finger, DHHC domain containing 19 (ZDHHC19), mRNA

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NM 144638 Homo sapiens hypothetical protein MGC29956 (MGC29956), mRNA NM 144639 Homo sapiens hypothetical protein FLJ31300 (FLJ31300), mRNA NM 144640 Homo sapiens interleukin 17 receptor E (IL17RE), transcript variant 3, mRNA NM 144641 Homo sapiens likely ortholog of mouse protein phosphatase 2C eta (FLJ323: NM\_144642 Homo sapiens synaptoporin (SYNPR), mRNA NM 144643 Homo sapiens hypothetical protein FLJ30655 (FLJ30655), mRNA NM 144644 Homo sapiens spermatogenesis associated 4 (SPATA4), mRNA NM\_144645 Homo sapiens hypothetical protein MGC26744 (MGC26744), mRNA NM 144646 Homo sapiens immunoglobulin J polypeptide, linker protein for immunoglobu NM 144647 Homo sapiens hypothetical protein MGC26610 (MGC26610), mRNA NM 144648 Homo sapiens hypothetical protein FLJ32786 (FLJ32786), mRNA NM 144649 Homo sapiens hypothetical protein FLJ33069 (FLJ33069), mRNA NM 144650 Homo sapiens alcohol dehydrogenase, iron containing, 1 (ADHFE1), mRNA NM 144651 Homo sapiens hypothetical protein FLJ25471 (FLJ25471), mRNA NM 144652 Homo sapiens leucine zipper-EF-hand containing transmembrane protein 2 ( NM 144653 Homo sapiens BTB (POZ) domain containing 14A (BTBD14A), mRNA NM 144654 Homo sapiens chromosome 9 open reading frame 116 (C9orf116), mRNA NM 144657 Homo sapiens hypothetical protein FLJ30678 (FLJ30678), mRNA NM\_144658 Homo sapiens dedicator of cytokinesis 11 (DOCK11), mRNA NM 144659 Homo sapiens t-complex 10 (mouse)-like (TCP10L), mRNA NM 144660 Homo sapiens sterile alpha motif domain containing 8 (SAMD8), mRNA NM 144661 Homo saplens chromosome 10 open reading frame 82 (C10orf82), mRNA NM 144662 Homo sapiens hypothetical protein MGC26605 (MGC26605), mRNA NM 144663 Homo sapiens NOV1 (NOV1), mRNA NM 144664 Homo sapiens hypothetical protein MGC33371 (MGC33371), mRNA NM 144665 Homo sapiens sestrin 3 (SESN3), mRNA NM\_144666 Homo sapiens hypothetical protein FLJ32752 (FLJ32752), mRNA NM\_144667 Homo sapiens hypothetical protein FLJ32894 (FLJ32894), mRNA NM 144668 Home saplens hypothetical protein MGC33630 (MGC33630), mRNA NM 144669 Homo sapiens hypothetical protein FLJ31978 (FLJ31978), mRNA NM 144670 Homo sapiens hypothetical protein FLJ25179 (FLJ25179), mRNA NM 144671 Homo sapiens hypothetical protein FLJ32356 (FLJ32356), mRNA NM 144672 Homo saplens otoancorin (OTOA), mRNA NM 144673 Homo sapiens chemokine-like factor super family 2 (CKLFSF2), mRNA NM 144674 Homo sapiens hypothetical protein FLJ32871 (FLJ32871), mRNA NM 144675 Homo sapiens hypothetical protein MGC18079 (MGC18079), mRNA NM 144676 Homo saplens hypothetical protein MGC23911 (MGC23911), mRNA NM\_144677 Homo sapiens mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetyl-glucosa NM\_144678 Homo sapiens target of myb1-like 2 (chicken) (TOM1L2), mRNA NM\_144679 Homo sapiens hypothetical protein FLJ31528 (FLJ31528), mRNA NM 144681 Homo sapiens hypothetical protein FLJ32734 (FLJ32734), mRNA NM 144682 Homo sapiens hypothetical protein FLJ31952 (FLJ31952), mRNA NM 144683 Homo sapiens hypothetical protein MGC23280 (MGC23280), mRNA NM 144684 Homo sapiens zinc finger protein 480 (ZNF480), mRNA NM 144685 Homo sapiens homeodomain interacting protein kinase 4 (HIPK4), mRNA NM 144686 Homo sapiens transmembrane channel-like 4 (TMC4), mRNA NM 144687 Homo sapiens NACHT, leucine rich repeat and PYD containing 12 (NALP12) NM 144688 Homo sapiens hypothetical protein FLJ32658 (FLJ32658), mRNA NM\_144689 Homo sapiens hypothetical protein FLJ32191 (FLJ32191), mRNA NM\_144690 Homo sapiens zinc finger protein 582 (ZNF582), mRNA NM 144691 Homo sapiens calpain 12 (CAPN12), mRNA NM 144692 Homo sapiens hypothetical protein BC017947 (LOC148137), mRNA NM 144693 Homo sapiens zinc finger protein 558 (ZNF558), mRNA NM 144694 Homo sapiens zinc finger protein 570 (ZNF570), mRNA NM 144695 Homo sapiens hypothetical protein FLJ32421 (FLJ32421), mRNA

NM\_144696 Homo sapiens hypothetical protein FLJ32940 (DKFZp686H1423), transcript NM\_144697 Homo sapiens hypothetical protein BC017397 (LOC148523), mRNA

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NM 144698 Homo sapiens hypothetical protein FLJ25124 (FLJ25124), mRNA NM 144699 Homo sapiens ATPase, Na+/K+ transporting, alpha 4 polypeptide (ATP1A4), NM 144701 Homo sapiens interleukin-23 receptor (IL23R), mRNA NM 144702 Homo sapiens hypothetical protein FLJ32884 (FLJ32884), mRNA NM 144703 Homo sapiens chromosome 20 open reading frame 40 (C20orf40), mRNA NM 144704 Homo sapiens hypothetical protein FLJ30473 (FLJ30473), mRNA NM\_144705 Homo sapiens hypothetical protein MGC27019 (MGC27019), mRNA NM 144706 Homo sapiens chromosome 2 open reading frame 15 (C2orf15), mRNA NM\_144707 Homo sapiens prominin 2 (PROM2), mRNA NM 144709 Homo saplens hypothetical protein FLJ32312 (FLJ32312), mRNA NM 144710 Homo sapiens septin 10 (SEPT10), transcript variant 1, mRNA NM\_144711 Homo sapiens hypothetical protein MGC22679 (MGC22679), mRNA NM 144712 Homo sapiens solute carrier family 23 (nucleobase transporters), member 3 NM 144713 Homo sapiens hypothetical protein FLJ32954 (FLJ32954), mRNA NM\_144714 Homo sapiens hypothetical protein MGC27069 (FLJ25449), mRNA NM 144715 Homo sapiens hypothetical protein FLJ25200 (FLJ25200), mRNA NM\_144716 Homo sapiens hypothetical protein MGC23918 (MGC23918), mRNA NM 144717 Homo sapiens hypothetical protein MGC34923 (MGC34923), mRNA NM 144718 Homo sapiens hypothetical protein AY099107 (LOC152185), mRNA NM 144719 Homo sapiens hypothetical protein FLJ25467 (FLJ25467), mRNA NM 144720 Homo sapiens multiple coiled-coil GABABR1-binding protein (MARLIN1), mF NM\_144721 Homo sapiens THAP domain containing 6 (THAP6), mRNA NM 144722 Homo sapiens KPL2 protein (FLJ23577), transcript variant 2, mRNA NM 144723 Homo sapiens hypothetical protein FLJ31121 (FLJ31121), mRNA NM 144724 Homo saplens MARVEL domain containing 2 (MARVELD2), mRNA NM 144725 Homo sapiens hypothetical protein FLJ25439 (FLJ25439), mRNA NM 144726 Homo sapiens hypothetical protein FLJ31951 (FLJ31951), mRNA NM 144727 Homo sapiens crystallin, gamma N (CRYGN), mRNA NM 144728 Homo sapiens dual specificity phosphatase 10 (DUSP10), transcript variant: NM 144729 Homo sapiens dual specificity phosphatase 10 (DUSP10), transcript variant : NM 144732 Homo sapiens heterogeneous nuclear ribonucleoprotein U-like 1 (HNRPUL1 NM\_144733 Homo sapiens heterogeneous nuclear ribonucleoprotein U-like 1 (HNRPUL1 NM\_144734 Homo sapiens heterogeneous nuclear ribonucleoprotein U-like 1 (HNRPUL1 NM 144736 Homo sapiens hypothetical protein PRO1853 (PRO1853), transcript variant 1 NM\_144765 Homo sapiens epithelial V-like antigen 1 (EVA1), transcript variant 2, mRNA NM\_144766 Homo sapiens regulator of G-protein signalling 13 (RGS13), transcript varian NM 144767 Homo saplens A kinase (PRKA) anchor protein 13 (AKAP13), transcript varia NM 144769 Homo sapiens forkhead box I1 (FOXI1), transcript variant 2, mRNA NM 144770 Homo sapiens RNA binding motif protein 11 (RBM11), mRNA NM 144772 Homo sapiens apollopprotein A-I binding protein (APOA1BP), mRNA NM 144773 Homo saplens G protein-coupled receptor 73-like 1 (GPR73L1), mRNA NM\_144775 Homo sapiens Smith-Magenis syndrome chromosome region, candidate 8 (5 NM\_144776 Homo sapiens formyltetrahydrofolate dehydrogenase (FTHFD), transcript vai NM 144777 Homo sapiens sciellin (SCEL), transcript variant 2, mRNA NM\_144778 Homo sapiens muscleblind-like 2 (Drosophila) (MBNL2), transcript variant 1, NM 144779 Homo sapiens FXYD domain containing ion transport regulator 5 (FXYD5), tr NM\_144780 Homo sapiens degenerative spermatocyte homolog, lipid desaturase (Droso) NM 144781 Homo sapiens programmed cell death 2 (PDCD2), transcript variant 2, mRN/ NM 144782 Homo sapiens carnitine acetyltransferase (CRAT), transcript variant 3, mRN/ NM 144947 Homo sapiens kallikrein 11 (KLK11), transcript variant 2, mRNA NM 144949 Homo sapiens suppressor of cytokine signaling 5 (SOCS5), transcript variant NM 144956 Homo sapiens protease, serine, 21 (testisin) (PRSS21), transcript variant 2, i

NM 144957 Homo sapiens protease, serine, 21 (testisin) (PRSS21), transcript variant 3, I NM 144962 Homo sapiens hypothetical protein MGC22776 (MGC22776), mRNA NM 144963 Homo sapiens hypothetical protein FLJ23790 (FLJ23790), mRNA

NM 144964 Homo sapiens RNA (guanine-9-) methyltransferase domain containing 3 (RC

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NM 144966 Homo sapiens chromosome 9 open reading frame 154 (C9orf154), mRNA NM 144967 Homo sapiens hypothetical protein FLJ30058 (FLJ30058), mRNA NM 144968 Homo sapiens hypothetical protein FLJ32783 (FLJ32783), mRNA NM 144969 Homo sapiens zinc finger, DHHC domain containing 15 (ZDHHC15), mRNA NM 144970 Homo sapiens hypothetical protein MGC39350 (MGC39350), mRNA NM\_144972 Homo sapiens lactate dehydrogenase A-like 6A (LDHAL6A), mRNA NM 144973 Homo sapiens hypothetical protein MGC24039 (MGC24039), mRNA NM 144974 Homo sapiens hypothetical protein FLJ31846 (FLJ31846), mRNA NM 144975 Home sapiens hypothetical protein MGC19764 (MGC19764), mRNA NM 144976 Homo sapiens zinc finger protein 564 (ZNF564), mRNA NM 144977 Homo sapiens family with sequence similarity 31, member B (FAM31B), mRt NM 144978 Homo sapiens hypothetical protein FLJ32745 (FLJ32745), mRNA NM 144979 Homo sapiens hypothetical protein MGC27016 (MGC27016), mRNA NM 144980 Homo sapiens chromosome 6 open reading frame 118 (C6orf118), mRNA NM 144981 Homo sapiens hypothetical protein FLJ25059 (FLJ25059), mRNA NM 144982 Homo saplens hypothetical protein MGC23401 (MGC23401), mRNA NM\_144984 Homo sapiens chromosome 10 open reading frame 72 (C10orf72), mRNA NM\_144985 Homo sapiens cadherin-like 24 (CDH24), mRNA NM 144987 Homo sapiens U2(RNU2) small nuclear RNA auxiliary factor 1-like 3 (U2AF1 NM\_144988 Homo sapiens hypothetical protein MGC19780 (MGC19780), mRNA NM 144990 Homo sapiens hypothetical protein FLJ23878 (FLJ23878), mRNA NM 144991 Homo sapiens chromosome 21 open reading frame 29 (C21orf29), mRNA NM\_144992 Homo sapiens hypothetical protein MGC26733 (MGC26733), mRNA NM 144994 Homo sapiens ankyrin repeat domain 23 (ANKRD23), mRNA NM 144995 Homo sapiens DEAH (Asp-Glu-Ala-Asp/His) box polypeptide 57 (DHX57), tra NM 144996 Homo sapiens hypothetical protein DKFZp761H079 (DKFZp761H079), trans-NM 144997 Homo saplens folliculin (BHD), transcript variant 1, mRNA NM\_144998 Homo sapiens stimulated by retinoic acid 13 (STRA13), mRNA NM\_144999 Homo sapiens hypothetical protein MGC20806 (MGC20806), mRNA NM 145000 Homo sapiens hypothetical protein FLJ25422 (FLJ25422), mRNA NM\_145001 Homo saplens serine/threonine kinase 32A (STK32A), mRNA NM 145003 Homo sapiens hypothetical protein FLJ31164 (FLJ31164), mRNA NM 145004 Homo sapiens a disintegrin and metalloproteinase domain 32 (ADAM32), mF NM 145005 Homo sapiens chromosome 9 open reading frame 72 (C9orf72), transcript ve NM 145008 Homo sapiens sushi domain containing 3 (SUSD3), mRNA NM 145007 Homo sapiens NACHT, leucine rich repeat and PYD containing 11 (NALP11) NM 145008 Homo sapiens hypothetical protein FLJ30213 (FLJ30213), mRNA NM\_145010 Homo sapiens chromosome 10 open reading frame 63 (C10orf63), mRNA NM 145011 Homo saplens zinc finger protein 25 (KOX 19) (ZNF25), mRNA NM\_145012 Homo sapiens chromosome 10 open reading frame 9 (C10orf9), mRNA NM\_145013 Homo sapiens hypothetical protein MGC35558 (MGC35558), mRNA NM\_145014 Homo sapiens hypothetical protein FLJ32915 (FLJ32915), mRNA NM 145015 Homo saplens MAS-related GPR, member F (MRGPRF), mRNA NM 145016 Homo sapiens BXMAS2-10 (BXMAS2-10), mRNA NM 145017 Homo saplens IIIG9 protein (FLJ32771), mRNA NM 145018 Homo sapiens hypothetical protein FLJ25416 (FLJ25416), mRNA NM 145019 Homo sapiens hypothetical protein FLJ30707 (FLJ30707), mRNA NM 145020 Homo sapiens hypothetical protein FLJ32743 (FLJ32743), mRNA NM 145021 Homo sapiens c-mir, cellular modulator of immune recognition (MIR), transcr NM\_145023 Homo sapiens coiled-coil domain containing 7 (CCDC7), mRNA NM 145024 Homo sapiens hypothetical protein FLJ31547 (FLJ31547), mRNA NM 145025 Home sapiens chromosome 6 open reading frame 199 (C6orf199), mRNA NM\_145026 Homo sapiens spermatogenesis associated, serine-rich 1 (SPATS1), mRNA NM\_145027 Homo sapiens chromosome 6 open reading frame 102 (C6orf102), mRNA NM 145028 Homo sapiens chromosome 6 open reading frame 81 (C6orf81), mRNA NM 145029 Homo sapiens chromosome 6 open reading frame 136 (C6orf136), mRNA

NM 145030 Homo saplens hypothetical protein MGC22793 (MGC22793), mRNA

NM\_145032 Homo sapiens F-box and leucine-rich repeat protein 13 (FBXL13), mRNA NM\_145033 Homo sapiens chromosome 21 open reading frame 100 (C21orf100), mRNA NM 145034 Homo sapiens AF464140 (LOC163590), mRNA NM 145035 Homo sapiens ADMP (ADMP), mRNA NM\_145036 Homo sapiens hypothetical protein MGC33887 (MGC33887), mRNA NM 145037 Homo sapiens hypothetical protein MGC15606 (MGC15606), mRNA NM 145038 Homo sapiens CG10958-like (MGC16372), mRNA NM 145039 Homo sapiens hypothetical protein MGC16385 (MGC16385), mRNA NM\_145040 Homo sapiens protein kinase C, delta binding protein (PRKCDBP), mRNA NM\_145041 Homo sapiens hypothetical protein MGC20235 (MGC20235), mRNA NM\_145042 Homo sapiens alpha tubulin-like (MGC16703), mRNA NM\_145043 Homo sapiens nei like 2 (E. coli) (NEIL2), mRNA NM 145044 Homo sapiens zinc finger protein 501 (ZNF501), mRNA NM 145045 Homo sapiens hypothetical protein MGC20983 (MGC20983), mRNA NM\_145046 Homo sapiens calreticulin 3 (CALR3), mRNA NM 145047 Homo sapiens oxidored-nitro domain-containing protein (NOR1), transcript vi NM\_145048 Homo sapiens hypothetical protein MGC29898 (MGC29898), mRNA NM\_145049 Homo sapiens hypothetical protein MGC10067 (MGC10067), mRNA NM\_145050 Homo sapiens hypothetical protein MGC27434 (MGC27434), mRNA NM\_145051 Homo sapiens hypothetical protein MGC4734 (MGC4734), mRNA NM\_145052 Homo sapiens hypothetical protein MGC23937 similar to CG4798 (MGC2395) NM\_145053 Homo saplens hypothetical protein MGC20470 (MGC20470), mRNA NM\_145054 Homo sapiens hypothetical protein LOC146845 (LOC146845), mRNA NM\_145055 Homo sapiens chromosome 18 open reading frame 25 (C18orf25), mRNA NM 145056 Homo sapiens thymus expressed gene 3-like (MGC15476), mRNA NM 145057 Homo sapiens CDC42 effector protein (Rho GTPase binding) 5 (CDC42EP5) NM 145058 Homo sapiens hypothetical protein MGC7036 (MGC7036), mRNA NM 145059 Homo saplens fucokinase (FUK), mRNA NM 145060 Homo sapiens chromosome 18 open reading frame 24 (C18orf24), mRNA NM\_145061 Homo sapiens chromosome 13 open reading frame 3 (C13orf3), mRNA NM\_145062 Homo sapiens chromosome 6 open reading frame 113 (C6orf113), mRNA NM\_145063 Homo sapiens chromosome 6 open reading frame 130 (C6orf130), mRNA NM\_145064 Homo sapiens SH3 and cysteine rich domain 3 (STAC3), mRNA NM\_145065 Homo sapiens pellino 3 alpha (MGC35521), mRNA NM 145068 Homo sapiens transient receptor potential cation channel, subfamily V, mem NM 145071 Homo sapiens cytokine inducible SH2-containing protein (CISH), transcript v. NM 145074 Homo sapiens protease, serine, 25 (PRSS25), nuclear gene encoding mitod NM 145080 Homo saplens non-SMC (structural maintenance of chromosomes) element NM 145102 Homo sapiens zinc finger protein 95 homolog (mouse) (ZFP95), transcript va NM 145109 Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), transcri NM 145110 Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), transcri NM\_145111 Homo saplens hypothetical protein DKFZp727G131 (DKFZp727G131), mRN NM\_145112 Homo sapiens MAX protein (MAX), transcript variant 2, mRNA NM\_145113 Homo sapiens MAX protein (MAX), transcript variant 3, mRNA NM 145114 Homo saplens MAX protein (MAX), transcript variant 4, mRNA NM\_145115 Homo sapiens zinc finger protein 498 (ZNF498), mRNA NM\_145116 Homo sapiens MAX protein (MAX), transcript variant 5, mRNA NM 145117 Homo sapiens neuron navigator 2 (NAV2), transcript variant 2, mRNA NM 145119 Homo sapiens praja 1 (PJA1), mRNA NM\_145159 Homo sapiens jagged 2 (JAG2), transcript variant 2, mRNA NM 145160 Homo sapiens mitogen-activated protein kinase kinase 5 (MAP2K5), transcri NM\_145161 Homo sapiens mitogen-activated protein kinase kinase 5 (MAP2K5), transcri NM\_145162 Homo sapiens mitogen-activated protein kinase kinase 5 (MAP2K5), transcri NM\_145165 Homo sapiens churchill domain containing 1 (CHURC1), mRNA NM\_145166 Homo sapiens hypothetical protein KIAA1190 (KIAA1190), mRNA

NM\_145167 Homo sapiens phosphatidylinositol glycan, class M (PIGM), mRNA NM\_145168 Homo sapiens NAD(P) dependent steroid dehydrogenase-like (HSPC105), n

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NM 145170 Homo sapiens tetratricopeptide repeat domain 18 (TTC18), mRNA NM 145171 Homo sapiens glycoprotein hormone beta 5 (GPHB5), mRNA NM 145172 Homo sapiens testis development protein NYD-SP29 (NYD-SP29), mRNA NM 145173 Homo sapiens DIRAS family, GTP-binding RAS-like 1 (DIRAS1), mRNA NM\_145174 Homo sapiens DnaJ (Hsp40) homolog, subfamily B, member 7 (DNAJB7), m NM 145175 Homo sapiens NSE1 (NSE1), mRNA NM 145176 Homo sapiens solute carrier family 2 (facilitated glucose transporter), member NM 145177 Homo sapiens dehydrogenase/reductase (SDR family) X-linked (DHRSX), m NM 145178 Homo sapilens atonal homolog 7 (Drosophila) (ATOH7), mRNA NM\_145179 Homo sapiens chromosome 21 open reading frame 93 (C21orf93), mRNA NM 145180 Homo sapiens chromosome 21 open reading frame 94 (C21orf94), mRNA NM 145182 Homo sapiens PYD and CARD domain containing (PYCARD), transcript vari-NM 145183 Home sapiens PYD and CARD domain containing (PYCARD), transcript vari-NM 145185 Homo sapiens mitogen-activated protein kinase kinase 7 (MAP2K7), mRNA NM 145186 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 11 NM 145187 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 12 NM 145188 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 12 NM\_145189 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 12 NM 145190 Homo samlens ATP-binding cassette, sub-family C (CFTR/MRP), member 12 NM 145196 Homo sarciens lipovitransferase 1 (LIPT1), transcript variant 2, mRNA NM 145197 Homo sapiens Ilpovitransferase 1 (LIPT1), transcript variant 3, mRNA NM 145198 Homo sapiens lipovitransferase 1 (LIPT1), transcript variant 4, mRNA NM 145199 Homo sapiens lipovitransferase 1 (LIPT1), transcript variant 5, mRNA NM 145200 Homo saplens calcium binding protein 4 (CABP4), mRNA NM 145201 Homo sarpiens similar to CG3714 gene product (PP3856), mRNA NM 145202 Homo sapiens proline-rich acidic protein 1 (PRAP1), mRNA NM 145203 Homo sapiens casein kinase 1, alpha 1-like (CSNK1A1L), mRNA NM 145204 Homo saplens SUMO/sentrin specific protease family member 8 (SENP8), m NM 145205 Homo sarpiens HMG2 like (LOC127540), mRNA NM 145206 Home sarpiens vesicle transport through interaction with t-SNAREs homolog NM\_145207 Homo sapiens spermatogenesis associated 5 (SPATA5), mRNA NM\_145208 Homo saptens methyl-CpG binding domain protein 3-like 1 (MBD3L1), mRN/ NM\_145212 Homo sapiens mitochondrial ribosomal protein L30 (MRPL30), nuclear gene NM 145213 Homo sarpiens mitochondrial ribosomal protein L30 (MRPL30), nuclear gene NM\_145214 Homo sapiens tripartite motif-containing 11 (TRIM11), mRNA NM\_145230 Homo saplens chromosome 7 open reading frame 32 (C7orf32), mRNA NM 145231 Homo sapiens chromosome 14 open reading frame 143 (C14orf143), mRNA NM 145232 Homo sapiens LOC90353 (LOC90353), mRNA NM 145233 Homo sapiens zinc finger protein 625 (ZNF625), mRNA NM 145234 Homo sapiens chordin-like 1 (CHRDL1), mRNA NM\_145235 Homo sapiens fibronectin type 3 and ankyrin repeat domains 1 (FANK1), mR NM\_145236 Homo sarpiens UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransfera NM\_145237 Homo sarpiens similar to RNA polymerase I transcription factor RRN3 (LOC9 NM\_145238 Homo saplens zinc finger protein 31 (KOX 29) (ZNF31), mRNA NM\_145239 Homo sapiens similar to lymphocyte antigen 6 complex, locus G5B; G5b prol NM 145241 Homo sapiens WD repeat domain 31 (WDR31), mRNA NM\_145242 Homo sapiens similar to POSSIBLE GUSTATORY RECEPTOR CLONE PTE NM\_145243 Homo salpiens metalloprotease related protein 1 (MPRP-1), mRNA NM 145244 Homo sapiens DNA-damage-inducible transcript 4-like (DDIT4L), mRNA NM 145245 Homo sapiens ecotropic viral integration site 5-like (EVI5L), mRNA NM\_145246 Homo sapiens chromosome 10 open reading frame 4 (C10orf4), transcript va NM 145247 Homo sarpiens chromosome 10 open reading frame 78 (C10orf78), transcript NM 145248 Homo sapiens LOC122258 (LOC122258), mRNA NM 145249 Homo sarpiens family with sequence similarity 14, member B (FAM14B), mRt NM 145250 Homo sapiens chromosome 14 open reading frame 6 (C14orf6), mRNA NM 145251 Homo sapiens serine/threonine/tyrosine interacting protein (STYX), mRNA

NM 145169 Homo sapiens chromosome 6 open reading frame 83 (C6orf83), mRNA

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NM 145252 Homo sapiens similar to common salivary protein 1 (LOC124220), mRNA NM 145253 Homo sapiens LOC124402 (LOC124402), mRNA NM 145254 Homo sapiens LOC124491 (LOC124491), mRNA NM 145255 Homo sapiens mitochondrial ribosomal protein L10 (MRPL10), nuclear gene NM 145256 Homo sapiens leucine rich repeat containing 25 (LRRC25), mRNA NM 145257 Homo sapiens LOC126731 (LOC126731), mRNA NM\_145258 Homo sapiens hypothetical protein MGC22773 (MGC22773), mRNA NM\_145259 Homo sapiens activin A receptor, type IC (ACVR1C), mRNA NM\_145260 Homo sapiens odd-skipped homolog (Drosophila) (ODD), mRNA NM 145261 Homo sapiens homolog of yeast TIM14 (TIM14), transcript variant 1, mRNA NM 145262 Homo sapiens CG9886-like (GLYCTK), mRNA NM 145263 Homo sapiens LOC132671 (LOC132671), mRNA NM 145265 Homo sapiens similar to RIKEN cDNA 0610011N22 (LOC133957), mRNA NM 145266 Homo sapiens similar to RIKEN cDNA 2700047N05 (LOC134492), mRNA NM 145267 Homo sapiens chromosome 6 open reading frame 57 (C6orf57), mRNA NM 145268 Homo sapiens LOC136263 (LOC136263), mRNA NM 145269 Homo saplens similar to CG6405 gene product (LOC137392), mRNA NM\_145270 Homo saplens similar to hypothetical protein FLJ13841 (LOC146325), mRN/ NM\_145271 Homo sapiens similar to hypothetical protein MGC13138 (LOC146542), mRN NM\_145272 Homo saplens LOC146853 (LOC146853), mRNA NM 145273 Home sapiens triggering receptor expressed on myeloid cells 4 (TREM4), ml NM 145274 Homo saplens hypothetical protein MGC21518 (MGC21518), mRNA NM\_145275 Homo sapiens kinesin light chain 2-like (KLC2L), transcript variant 2, mRNA NM 145276 Homo sapiens zinc finger protein 563 (ZNF563), mRNA NM 145277 Homo sapiens hemochromatosis type 2 (juvenile) (HFE2), transcript variant t NM 145278 Homo sapiens LOC148823 (LOC148823), mRNA NM\_145279 Homo sapiens MOB1, Mps One Binder kinase activator-like 2C (yeast) (MOE NM 145280 Home sapiens similar to hepatocellular carcinoma-associated antigen HCA58 NM\_145282 Homo sapiens similar to CG4995 gene product (LOC153328), mRNA NM\_145283 Ho mo sapiens chromosome 9 open reading frame 121 (C9orf121), mRNA NM 145284 Home sapiens similar to hypothetical protein MGC17347 (LOC159090), mRN NM 145285 Homo sapiens NK2 transcription factor related, locus 3 (Drosophila) (NKX2-3 NM 145286 Homo sapiens stomatin (EPB72)-like 3 (STOML3), mRNA NM 145287 Homo sapiens zinc finger protein 519 (ZNF519), mRNA NM 145288 Homo sapiens zinc finger protein 342 (ZNF342), mRNA NM\_145291 Homo sapiens zinc finger protein 509 (ZNF509), mRNA NM 145292 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga NM\_145293 Homo sapiens similar to hypothetical protein FLJ20897 (LOC196549), mRN/ NM 145294 Homo sapiens similar to RIKEN cDNA 3230401M21 [Mus musculus] (LOC19 NM\_145295 Homo saplens zinc finger protein 627 (ZNF627), mRNA NM 145296 Homo sapiens immunoglobulin superfamily, member 4C (IGSF4C), mRNA NM 145297 Homo sapiens zinc finger protein 626 (ZNF626), mRNA NM 145298 Homo sapiens apolipoprotein B mRNA editing enzyme, catalytic polypeptide-NM 145299 Homo sapiens similar to Dynein heavy chain at 16F (LOC200383), mRNA NM\_145300 Homo sapiens LOC200420 (LOC200420), mRNA NM 145301 Homo sapiens similar to CGI-148 protein (LOC201158), mRNA NM 145303 Homo sapiens similar to RIKEN cDNA 2310008M10 (LOC202459), mRNA NM 145304 Homo sapiens chromosome 7 open reading frame 33 (C7orf33), mRNA NM 145305 Home sapiens similar to solute carrier family 25, member 16 (LOC203427), NM\_145306 Homo sapiens chromosome 10 open reading frame 35 (C10orf35), mRNA NM 145307 Homo sapiens pleckstrin homology domain containing, family K member 1 (F NM\_145308 Homo sapiens hypothetical protein BC004224 (LOC220070), mRNA NM\_145309 Homo sapiens Hypothetical 55.1 kDa protein F09G8.5 in chromosome III (LC NM 145310 Homo sapiens zinc finger protein 258 (ZNF258), mRNA

NM 145311 Homo sapiens crystallin, zeta (quinone reductase)-like 1 (CRYZL1), transcrip NM 145312 Homo sapiens zinc finger protein 485 (ZNF485), mRNA NM 145313 Home sapiens RasGEF domain family, member 1A (RASGEF1A), mRNA

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NM\_145314 Homo sapiens chromosome 10 open reading frame 49 (C10orf49), mRNA NM 145315 Homo sapiens lactation elevated 1 (LACE1), mRNA NM 145316 Homo sapiens chromosome 6 open reading frame 128 (C6orf128), mRNA NM 145320 Homo sapiens oxysterol binding protein-like 3 (OSBPL3), transcript variant 2 NM 145321 Homo sapiens oxysterol binding protein-like 3 (OSBPL3), transcript variant 3 NM 145322 Homo sapiens oxysterol binding protein-like 3 (OSBPL3), transcript variant 4 NM\_145323 Homo sapiens oxysterol binding protein-like 3 (OSBPL3), transcript variant 5 NM\_145324 Homo sapiens oxysterol binding protein-like 3 (OSBPL3), transcript variant 6 NM\_145325 Homo sapiens DNA directed RNA polymerase II polypeptide J-related gene ( NM 145326 Homo sapiens similar to hypothetical protein FLJ13659 (LOC115648), mRN/ NM 145328 Homo sapien's chromosome 21 open reading frame 66 (C21orf66), transcript NM 145330 Homo sapiens mitochondrial ribosomal protein L33 (MRPL33), nuclear gene NM 145331 Homo sapiens mitogen-activated protein kinase kinase kinase 7 (MAP3K7). 1 NM 145332 Homo sapien's mitogen-activated protein kinase kinase kinase 7 (MAP3K7). 1 NM 145333 Homo sapiens mitogen-activated protein kinase kinase kinase 7 (MAP3K7), 1 NM\_145341 Homo sapiens programmed cell death 4 (neoplastic transformation inhibitor) NM 145342 Homo sapiens mitogen-activated protein kinase kinase kinase 7 interacting r. NM 145343 Homo sapiens apolipoprotein L. 1 (APOL1), transcript variant 2, mRNA NM 145344 Homo saplens apolipoprotein L. 1 (APOL1), transcript variant 3, mRNA NM\_145345 Homo sapiens socius (SOC), mRNA NM\_145346 Homo sapiens socius (SOC), mRNA NM 145347 Homo sapien's kringle containing transmembrane protein 2 (KREMEN2), tran NM\_145348 Homo saplens kringle containing transmembrane protein 2 (KREMEN2), tran NM\_145349 Homo saplen's scavenger receptor class F, member 1 (SCARF1), transcript \ NM 145350 Homo sapien's scavenger receptor class F, member 1 (SCARF1), transcript \ NM 145351 Homo sapien's scavenger receptor class F, member 1 (SCARF1), transcript \ NM 145352 Homo sapiens scavenger receptor class F, member 1 (SCARF1), transcript \ NM 145637 Homo sapiens apolipoprotein L. 2 (APOL2), transcript variant beta, mRNA NM 145638 Homo sapiens oxysterol binding protein-like 5 (OSBPL5), transcript variant 2 NM\_145639 Homo saplens apolipoprotein L, 3 (APOL3), transcript variant alpha/c, mRNA NM\_145640 Homo saplens apolipoprotein L, 3 (APOL3), transcript variant alpha/d, mRNA NM 145641 Homo sapiens apolipoprotein L, 3 (APOL3), transcript variant beta/a, mRNA NM 145642 Homo sapiens apolipoprotein L, 3 (APOL3), transcript variant beta/b, mRNA NM\_145644 Homo saplens mitochondrial ribosomal protein L35 (MRPL35), nuclear gene NM\_145645 Homo sapiens Williams-Beuren Syndrome critical region protein 20 copy B ( NM\_145646 Homo sapiens DEAH (Asp-Glu-Ala-Asp/His) box polypeptide 57 (DHX57), tra NM 145647 Homo sapien's unknown MGC21654 product (MGC21654), mRNA NM 145648 Homo saplens solute carrier family 15, member 4 (SLC15A4), mRNA NM 145649 Homo sapien's glucosaminyl (N-acetyl) transferase 2, I-branching enzyme (G NM 145650 Homo sapiens mucin 15 (MUC15), mRNA NM 145651 Homo sapiens ligand binding protein RYD5 (RYD5), mRNA NM 145652 Homo saplens WAP four-disulfide core domain 5 (WFDC5), mRNA NM\_145653 Homo sapiens transcription elongation factor B polypeptide 3C (elongin A3) ( NM\_145654 Homo sapien's RAD52 homolog B (S. cerevisiae) (RAD52B), mRNA NM\_145655 Homo sapiens glucosaminyl (N-acetyl) transferase 2, I-branching enzyme (G NM 145657 Homo sapiens GS homeobox 1 (GSH1), mRNA NM 145658 Homo sapien's sperm equatorial segment protein 1 (SPESP1), mRNA NM 145659 Homo sapiens Interleukin 27 (IL27), mRNA NM 145660 Homo sapien's apolipo protein L, 4 (APOL4), transcript variant b, mRNA NM 145662 Homo sapien's SPANX family, member A2 (SPANXA2), mRNA NM 145663 Homo sapien's Dbf4-related factor 1 (DRF1), transcript variant 1, mRNA NM 145664 Homo sapien's SPANX family, member B2 (SPANXB2), mRNA NM 145665 Homo sapiens SPANX family, member E (SPANXE), mRNA NM 145685 Home sapien's BRF1 homelog, subunit of RNA polymerase III transcription in NM\_145686 Homo sapien's mitogen-activated protein kinase kinase kinase kinase 4 (MAF NM 145687 Homo sapien's mitogen-activated protein kinase kinase kinase kinase 4 (MAF

NM 145689 Homo sapiens amyloid beta (A4) precursor protein-binding, family B, membe

NM 145690 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NM 145691 Homo sapiens ATP synthase mitochondrial F1 complex assembly factor 2 (A NM 145693 Homo sapiens lipin 1 (LPIN1), mRNA NM\_145695 Homo sapiens diacylglycerol kinase, beta 90kDa (DGKB), transcript variant 2 NM 145696 Homo sapiens BRF1 homolog, subunit of RNA polymerase III transcription in NM 145697 Homo sapiens cell division cycle associated 1 (CDCA1), transcript variant 1, NM\_145698 Homo sapiens acyl-Coenzyme A binding domain containing 5 (ACBD5), mRI NM\_145699 Homo sapiens apolipoprotein B mRNA editing enzyme, catalytic polypeptide NM\_145701 Homo sapiens cell division cycle associated 4 (CDCA4), transcript variant 2, NM 145702 Homo sapiens tigger transposable element derived 1 (TIGD1), mRNA NM\_145714 Homo sapiens ataxin 2 related protein (A2LP), transcript variant B, mRNA NM 145715 Homo sapiens tigger transposable element derived 2 (TIGD2), mRNA NM 145716 Homo sapiens single stranded DNA binding protein 3 (SSBP3), mRNA NM 145719 Homo sapiens tigger transposable element derived 3 (TIGD3), mRNA NM 145720 Homo sapiens tigger transposable element derived 4 (TIGD4), mRNA NM 145725 Homo sapiens TNF receptor-associated factor 3 (TRAF3), transcript variant " NM 145726 Homo sapiens TNF receptor-associated factor 3 (TRAF3), transcript variant 2 NM 145727 Homo sapiens lipoprotein, Lp(a)-like 2 (LPAL2), transcript variant 2, mRNA NM\_145728 Homo sapiens desmuslin (DMN), transcript variant A, mRNA NM 145729 Homo sapiens mitochondrial ribosomal protein L24 (MRPL24), nuclear gene NM 145730 Homo sapiens adaptor-related protein complex 1, beta 1 subunit (AP1B1), tra NM 145731 Homo sapiens synaptogyrin 1 (SYNGR1), transcript variant 1b, mRNA NM 145733 Homo sapiens septin 3 (SEPT3), transcript variant A, mRNA NM 145734 Homo sapiens septin 3 (SEPT3), transcript variant C, mRNA NM 145735 Homo sapiens Rho quanine nucleotide exchange factor (GEF) 7 (ARHGEF7) NM 145738 Homo sapiens synaptogyrin 1 (SYNGR1), transcript variant 1c, mRNA NM\_145739 Homo sapiens oxysterol binding protein-like 6 (OSBPL6), transcript variant 2 NM 145740 Homo sapiens criutathione S-transferase A1 (GSTA1), mRNA NM 145747 Homo sapiens thioredoxin reductase 2 (TXNRD2), nuclear gene encoding mi NM 145748 Homo sapiens thioredoxin reductase 2 (TXNRD2), nuclear gene encoding mi NM\_145751 Homo sapiens TNF receptor-associated factor 4 (TRAF4), transcript variant 2 NM 145752 Homo sapiens CDP-diacylolycerol--inositol 3-phosphatidyltransferase (phosp NM\_145753 Homo saplens pleckstrin homology-like domain, family B, member 2 (PHLDE NM\_145754 Homo sapiens kinesin family member C2 (KIFC2), mRNA NM 145755 Homo sapiens TPR domain containing STI2 (STI2), mRNA NM\_145756 Homo sapiens zinc finger protein 396 (ZNF396), mRNA NM\_145759 Homo sapiens TNF receptor-associated factor 5 (TRAF5), transcript variant 2 NM\_145762 Homo saplens GDNF family receptor alpha 4 (GFRA4), transcript variant 2, r NM\_145763 Homo sapiens GDNF family receptor alpha 4 (GFRA4), transcript variant 3, r NM 145764 Homo sapiens microsomal glutathione S-transferase 1 (MGST1), transcript v NM 145791 Homo sapiens microsomal glutathione S-transferase 1 (MGST1), transcript v NM 145792 Homo sapiens microsomal glutathione S-transferase 1 (MGST1), transcript v NM 145793 Homo sapiens GDNF family receptor alpha 1 (GFRA1), transcript variant 2, r NM\_145794 Homo sapiens downstream neighbor of SON (DONSON), transcript variant 2 NM\_145795 Homo sapiens downstream neighbor of SON (DONSON), transcript variant 3 NM 145796 Homo sapiens pogo transposable element with ZNF domain (POGZ), transcr NM 145798 Homo sapiens oxysterol binding protein-like 7 (OSBPL7), transcript variant 1 NM 145799 Homo sapiens septin 6 (SEPT6), transcript variant I, mRNA NM 145800 Homo sapiens septin 6 (SEPT6), transcript variant III, mRNA NM\_145802 Homo sapiens septin 6 (SEPT6), transcript variant V, mRNA NM 145803 Homo sapiens TNF receptor-associated factor 6 (TRAF6), transcript variant ' NM 145804 Homo sapiens ankyrin repeat and BTB (POZ) domain containing 2 (ABTB2), NM 145805 Homo sapiens ISL2 transcription factor, LIM/homeodomain, (islet-2) (ISL2), r NM 145806 Homo sapiens zinc finger protein 511 (ZNF511), mRNA NM 145807 Homo sapiens hypothetical protein BC018697 (LOC126147), mRNA

NM 145808 Homo sapiens myotrophin (MTPN), mRNA

NM 145809 Homo sapiens TL132 protein (LOC220594), mRNA

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NM 145810 Homo sapiens cell division cycle associated 7 (CDCA7), transcript variant 2,
NM 145811 Homo sapiens calcium channel, voltage-dependent, gamma subunit 5 (CACI
NM 145812 Homo sapiens programmed cell death 8 (apoptosis-inducing factor) (PDCD8
NM 145813 Homo sapiens programmed cell death 8 (apoptosis-inducing factor) (PDCD8
NM 145814 Homo sapiens calcium channel, voltage-dependent, gamma subunit 6 (CACI
NM 145815 Homo sapiens calcium channel, voltage-dependent, gamma subunit 6 (CACI
NM 145818 Homo sapiens component of oligomeric golgi complex 4 (COG4), transcript v
NM_145858 Homo sapiens crystallin, zeta (quinone reductase)-like 1 (CRYZL1), transcrip
NM_145859 Homo sapiens programmed cell death 10 (PDCD10), transcript variant 2, mF
NM_145860 Homo sapiens programmed cell death 10 (PDCD10), transcript variant 3, mF
NM 145861 Homo sapiens EDAR-associated death domain (EDARADD), transcript varia
NM 145862 Homo sapiens CHK2 checkpoint homolog (S. pombe) (CHEK2), transcript va
NM 145863 Homo sapiens ankyrin repeat and SOCS box-containing 3 (ASB3), transcript
NM 145864 Horno saplens kallikrein 3, (prostate specific antigen) (KLK3), transcript varia
NM 145865 Homo sapjens hypothetical protein FLJ38819 (FLJ38819), mRNA
NM 145867 Homo sapiens leukotriene C4 synthase (LTC4S), transcript variant 1, mRNA
NM 145868 Homo sa piens annexin A11 (ANXA11), transcript variant b, mRNA
NM 145869 Homo saplens annexin A11 (ANXA11), transcript variant c, mRNA
NM_145870 Homo sa piens glutathione transferase zeta 1 (maleylacetoacetate Isomerase
NM_145871 Homo sapiens glutathione transferase zeta 1 (maleylacetoacetate isomerase
NM 145872 Homo sapiens ankyrin repeat and SOCS box-containing 4 (ASB4), transcript
NM 145886 Homo sapiens leucine-rich repeats and death domain containing (LRDD), tra
NM 145887 Homo saplens leucine-rich repeats and death domain containing (LRDD), tra
NM 145888 Homo sapiens kallikrein 10 (KLK10), transcript variant 2, mRNA
NM 145891 Homo sapiens ataxin 2-binding protein 1 (A2BP1), transcript variant 1, mRN/
NM_145892 Homo sapiens ataxin 2-binding protein 1 (A2BP1), transcript variant 2, mRN/
NM 145893 Homo sapiens ataxin 2-binding protein 1 (A2BP1), transcript variant 3, mRN/
NM 145894 Homo sapiens kallikrein 12 (KLK12), transcript varlant 2, mRNA
NM 145895 Homo saplens kallikrein 12 (KLK12), transcript variant 3, mRNA
NM 145896 Homo sapiens prefoldin 5 (PFDN5), transcript variant 2, mRNA
NM 145897 Homo sapiens prefoldin 5 (PFDN5), transcript variant 3, mRNA
NM_145898 Homo sapiens chemokine (C-C motif) ligand 23 (CCL23), transcript variant C
NM 145899 Homo saplens high mobility group AT-hook 1 (HMGA1), transcript variant 1, i
NM 145901 Homo sapiens high mobility group AT-hook 1 (HMGA1), transcript variant 3, i
NM 145902 Homo sapiens high mobility group AT-hook 1 (HMGA1), transcript variant 4, I
NM_145903 Homo sapiens high mobility group AT-hook 1 (HMGA1), transcript variant 5, I
NM_145904 Homo sapiens high mobility group AT-hook 1 (HMGA1), transcript variant 6, I
NM 145905 Homo sapiens high mobility group AT-hook 1 (HMGA1), transcript variant 7, I
NM 145906 Homo sa piens RIO kinase 3 (yeast) (RIOK3), transcript variant 2, mRNA
NM_145909 Homo sapiens zinc finger protein 323 (ZNF323), mRNA
NM_145910 Homo sapiens NIMA (never in mitosis gene a)- related kinase 11 (NEK11), rr
NM_145911 Homo sapiens zinc finger protein 23 (KOX 16) (ZNF23), mRNA
NM 145912 Homo sapiens NFAT activation molecule 1 (NFAM1), mRNA
NM 145913 Homo saplens solute carrier family 5 (iodide transporter), member 8 (SLC5A)
NM 145914 Homo sapiens zinc finger protein 38 (ZNF38), mRNA
NM_145918 Homo sapiens cathepsin L (CTSL), transcript variant 2, mRNA
NM_146387 Homo sapiens mitochondrial ribosomal protein L4 (MRPL4), nuclear gene en
NM 146388 Homo sa piens mitochondrial ribosomal protein L4 (MRPL4), nuclear gene en
NM 146421 Homo sapiens glutathione S-transferase M1 (GSTM1), transcript variant 2, m
NM 147127 Homo sapiens Ellis van Creveld syndrome 2 (limbin) (EVC2), mRNA
NM_147128 Homo sapiens zinc and ring finger 2 (ZNRF2), mRNA
NM 147129 Homo sapiens hypothetical protein LOC259173 (FLJ36525), transcript variar
NM 147130 Homo sapiens natural cytotoxicity triggering receptor 3 (NCR3), mRNA
NM 147131 Homo sapiens galactose-1-phosphate undylyltransferase (GALT), transcript
NM 147132 Homo sapiens galactose-1-phosphate undylyttransferase (GALT), transcript
NM 147133 Homo sapiens nuclear transcription factor, X-box binding 1 (NFX1), transcrip
NM 147134 Homo sapiens nuclear transcription factor, X-box binding 1 (NFX1), transcrip
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NM\_147147 Homo sapiens blood vessell epicardial substance (BVES), transcript variant E NM\_147148 Homo sapiens glutathione S-transferase M4 (GSTM4), transcript variant 2, m NM 147149 Homo sapiens glutathione S-transferase M4 (GSTM4), transcript variant 3, m NM 147150 Homo sapiens A kinase (PRKA) anchor protein 2 (AKAP2), transcript variant NM 147152 Homo sapiens intersectin 2 (ITSN2), transcript variant 2, mRNA NM 147156 Homo sapiens transmembrane protein 23 (TMEM23), mRNA NM 147157 Homo sapiens opioid receptor, sigma 1 (OPRS1), transcript variant 2, mRNA NM 147158 Homo sapiens opioid receptor, sigma 1 (OPRS1), transcript variant 3, mRNA NM 147159 Homo sapiens opioid receptor, sigma 1 (OPRS1), transcript variant 4, mRNA NM\_147160 Homo sapiens opioid receptor, sigma 1 (OPRS1), transcript variant 5, mRNA NM 147161 Homo sapiens thioesterase, adipose associated (THEA), transcript variant 2, NM 147162 Homo sapiens interleukin 1 1 receptor, alpha (IL11RA), transcript variant 2, m NM 147164 Homo sapiens ciliary neuro trophic factor receptor (CNTFR), transcript varian NM 147166 Homo sapiens A kinase (PRKA) anchor protein (votiao) 9 (AKAP9), transcrip NM 147168 Homo sapiens chromosom e 9 open reading frame 24 (C9orf24), transcript v∉ NM 147169 Homo sapiens chromosom e 9 open reading frame 24 (C9orf24), transcript va NM 147171 Homo sapiens A kinase (PIRKA) anchor protein (votiao) 9 (AKAP9), transcrip NM\_147172 Homo saplens nudlx (nucle-oside diphosphate linked moiety X)-type motif 2 (I NM 147173 Homo sapiens nudix (nucle-oside diphosphate linked molety X)-type motif 2 (I NM 147174 Homo sapiens heparan sul fate 6-O-sulfotransferase 2 (HS6ST2), mRNA NM 147175 Homo sapiens heparan sul fate 6-O-sulfotransferase 2 (HS6ST2), transcript v NM\_147180 Homo sapiens protein phosphatase 3 (formerly 2B), regulatory subunit B, 19 NM 147181 Homo sapiens Kv channel Interacting protein 4 (KCNIP4), transcript variant 2 NM\_147182 Homo sapiens Kv channel Interacting protein 4 (KCNIP4), transcript variant 3 NM 147183 Homo sapiens Ky channel interacting protein 4 (KCNIP4), transcript variant 4 NM\_147184 Homo sapiens tumor protein p53 inducible protein 3 (TP53I3), transcript varia NM\_147185 Homo sapiens A kinase (PRKA) anchor protein (yotiao) 9 (AKAP9), transcrip NM 147187 Homo saplens tumor necro sis factor receptor superfamily, member 10b (TNF NM 147188 Homo sapiens F-box protein 22 (FBXO22), transcript variant 1, mRNA NM\_147189 Homo sapiens hypothetical protein MGC39325 (MGC39325), mRNA NM 147190 Homo sapiens LAG1 longe vity assurance homolog 5 (S. cerevisiae) (LASS5) NM 147191 Homo sapiens matrix meta Hoproteinase 21 (MMP21), mRNA NM 147192 Homo sapiens diencephalo n/mesencephalon homeobox 1 (DMBX1), transcri NM 147193 Homo sapiens GLIS family zinc finger 1 (GLIS1), mRNA NM 147194 Homo sapiens hypothetical protein MGC35361 (MGC35361), mRNA NM 147195 Homo saplens FLJ35740 p rotein (FLJ35740), mRNA NM 147196 Homo sapiens transmembrane inner ear (TMIE), mRNA NM\_147197 Homo sapiens WAP four-d isulfide core domain 11 (WFDC11), mRNA NM 147198 Homo sapiens WAP four-d isulfide core domain 9 (WFDC9), mRNA NM\_147199 Homo sapiens G protein-coupled receptor MRGX1 (MRGX1), mRNA NM 147200 Homo sapiens chromosom e 6 open reading frame 4 (C6orf4), transcript varia NM 147202 Homo sapiens chromosom e 9 open reading frame 25 (C9orf25), mRNA NM 147203 Homo sapiens fibrinogen-li ke 1 (FGL1), transcript variant 2, mRNA NM 147204 Homo sapiens transient receptor potential cation channel, subfamily V, mem NM\_147223 Homo sapiens nuclear receptor coactivator 1 (NCOA1), transcript variant 2, r NM 147233 Homo sapiens nuclear receptor coactivator 1 (NCOA1), transcript variant 3, r NM 147686 Homo sapiens chromosom e 6 open reading frame 4 (C6orf4), transcript varia NM 147777 Homo sapiens sorting next n 15 (SNX15), transcript variant B, mRNA NM 147780 Homo sapiens cathepsin B (CTSB), transcript variant 2, mRNA NM 147781 Homo sapiens cathepsin B (CTSB), transcript variant 3, mRNA NM\_147782 Homo sapiens cathepsin B (CTSB), transcript variant 4, mRNA NM 147783 Homo sapiens cathepsin B (CTSB), transcript variant 5, mRNA NM\_148169 Homo sapiens F-box prote in 17 (FBXO17), transcript variant 1, mRNA NM 148170 Homo sapiens cathepsin C (CTSC), transcript variant 2, mRNA NM 148171 Homo sapiens ubiquitin as sociated protein 2 (UBAP2), transcript variant 3, m NM 148172 Homo sapiens phosphatid viethanolamine N-methyltransferase (PEMT), nucle

NM 148173 Homo sapiens phosphatidylethanolamine N-methyltransferase (PEMT), nucle

NM 148174 Homo sapiens ornithine decarboxylase antizyme inhibitor (OAZIN), transcript NM 148175 Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 2 (PPIL2), transcript NM 148176 Homo sapiens peotidylprolyl isomerase (cyclophilin)-like 2 (PPIL2), transcript NM 148177 Homo sapiens F-box protein 32 (FBXO32), transcript variant 2, mRNA NM 148178 Homo sapiens chromosome 9 open reading frame 23 (C9orf23), transcript ve NM 148179 Homo sapiens chromosome 9 open reading frame 23 (C9orf23), transcript v₂ NM 148414 Homo sapiens ataxin 2 related protein (A2LP), transcript variant C, mRNA NM 148415 Homo sapiens ataxin 2 related protein (A2LP), transcript variant D, mRNA NM 148416 Homo sapiens ataxin 2 related protein (A2LP), transcript variant E, mRNA NM 148570 Homo sapiens mitochondrial ribosomal protein L27 (MRPL27), nuclear gene NM 148571 Homo sapiens mitochondrial ribosomal protein L27 (MRPL27), nuclear gene NM 148672 Homo sapiens chemokine (C-C motif) ligand 28 (CCL28), transcript variant 2 NM\_148674 Homo sapiens SMC1 structural maintenance of chromosomes 1-like 2 (yeas) NM 148675 Home sapiens Down syndrome critical region gene 9 (DSCR9), mRNA NM 148676 Homo sapiens Down syndrome critical region gene 10 (DSCR10), mRNA NM 148842 Homo sapiens Williams-Beuren syndrome chromosome region 16 (WBSCR1 NM 148886 Homo sapiens Smith-Magenis syndrome chromosome region, candidate 7 (\$ NM 148887 Homo sapiens mitochondrial ribosomal protein L10 (MRPL10), nuclear gene NM 148888 Homo sapiens chemokine (C-C motif) ligand 25 (CCL25), transcript variant 2 NM 148894 Homo sapiens family with sequence similarity 44, member A (FAM44A), mRt NM 148896 Homo saplens preproneuropeptide B (NPB), mRNA NM\_148897 Homo sapiens orphan short-chain dehydrogenase / reductase (SDR-O), mRI NM 148898 Homo sapiens fork head box P2 (FOXP2), transcript variant 2, mRNA NM 148899 Homo sapiens forkhead box P2 (FOXP2), transcript variant 3, mRNA NM 148900 Homo sapiens fork head box P2 (FOXP2), transcript variant 4, mRNA NM\_148901 Homo sapiens turnor necrosis factor receptor superfamily, member 18 (TNFF NM 148902 Homo sapiens turnor necrosis factor receptor superfamily, member 18 (TNFF NM 148903 Homo saplens GREB1 protein (GREB1), transcript variant c, mRNA NM 148904 Homo sepiens oxysterol binding protein-like 9 (OSBPL9), transcript variant 1 NM 148905 Homo sapiens oxysterol binding protein-like 9 (OSBPL9), transcript variant 2 NM 148906 Homo sapiens oxysterol binding protein-like 9 (OSBPL9), transcript variant 3 NM 148907 Homo saplens oxysterol binding protein-like 9 (OSBPL9), transcript variant 4 NM 148908 Homo sapiens oxysterol binding protein-like 9 (OSBPL9), transcript variant 5 NM\_148909 Homo sapiens oxysterol binding protein-like 9 (OSBPL9), transcript variant 7 NM\_148910 Homo sapiens toll-interleukin 1 receptor (TIR) domain containing adaptor pro NM 148911 Homo sapiens CHRNA7 (cholinergic receptor, nicotinic, alpha polypeptide 7, NM\_148912 Homo sapiens Williams Beuren syndrome chromosome region 21 (WBSCR2 NM 148913 Homo sapiens Williams Beuren syndrome chromosome region 21 (WBSCR2 NM\_148914 Homo sapiens Williams Beuren syndrome chromosome region 21 (WBSCR2 NM\_148915 Homo sapiens Williams Beuren syndrome chromosome region 21 (WBSCR2 NM 148916 Homo sapiens Williams Beuren syndrome chromosome region 21 (WBSCR2 NM 148918 Homo sapiens serine hydroxymethyltransferase 1 (soluble) (SHMT1), transcr NM 148919 Homo sapiens proteasome (prosome, macropain) subunit, beta type, 8 (large NM 148920 Homo sapiens phosphatidylinositol glycan, class Q (PIGQ), transcript variant NM 148921 Homo sapiens epsin 2 (EPN2), transcript variant 1, mRNA NM 148923 Homo sapiens cytochrome b-5 (CYB5), mRNA NM\_148936 Homo sapiens Williams Beuren syndrome chromosome region 20C (WBSCF NM 148954 Homo sapiens proteasome (prosome, macropain) subunit, beta type, 9 (large NM\_148955 Homo sapiens sorting nexin 1 (SNX1), transcript variant 2, mRNA NM\_148956 Homo sapiens Williams Beuren syndrome chromosome region 20A (WBSCF NM\_148957 Homo sapiens tumor necrosis factor receptor superfamily, member 19 (TNFF NM\_148959 Homo sapiens HUS1 checkpoint homolog b (S. pombe) (HUS1B), mRNA NM 148960 Homo sapiens claudin 19 (CLDN19), mRNA NM 148961 Homo sapiens otospiralin (OTOS), mRNA NM 148962 Homo sapiens oxoeicosanoid (OXE) receptor 1 (OXER1), mRNA NM 148963 Homo sapiens G protein-coupled receptor, family C, group 6, member A (GP

NM 148964 Homo sapiens cathepsin E (CTSE), transcript variant 2, mRNA

NM\_148965 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM\_148966 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM\_148967 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM\_148968 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148969 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148970 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148971 Homo saplens tumor necrosis factor receptor superfamily, member 25 (TNFF NM\_148972 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148973 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148974 Homo sapiens tumor necrosis factor receptor superfamily, member 25 (TNFF NM 148975 Homo sapiens membrane-spanning 4-domains, subfamily A, member 4 (MS-NM 148976 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 1 (PSI NM 148977 Homo sapiens pantothenate ki nase 1 (PANK1), transcript variant alpha, mRN NM 148978 Homo sapiens pantothenate ki nase 1 (PANK1), transcript variant beta, mRN. NM\_148979 Homo sapiens cathepsin H (CTSH), transcript variant 2, mRNA NM\_148980 Homo sapiens Williams Beuren syndrome chromosome region 20C (WBSCF NM\_149379 Homo sapiens Williams Beuren syndrome chromosome region 20C (WBSCF NM 152132 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 3 (PSI NM 152133 Homo sapiens T-cell activation GTPase activating protein (TAGAP), transcrip NM 152219 Homo sapiens gap junction protein, chi 1, 31,9kDa (connexin 31,9) (GJC1), r NM 152221 Homo sapiens casein kinase 1, epsilon (CSNK1E), transcript variant 1, mRN NM 152222 Homo saplens tumor necrosis factor receptor superfamily, member 19-like (1 NM\_152223 Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPI NM\_152224 Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPI NM 152225 Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPI NM 152226 Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPI NM 152227 Homo sapiens sorting nexin 5 (SNX5), transcript variant 1, mRNA NM 152230 Homo sapiens inositol polypho sphate multikinase (IPMK), mRNA NM 152232 Homo sapiens taste receptor, type 1, member 2 (TAS1R2), mRNA NM\_152233 Homo saplens sorting nextn 6 (SNX6), transcript variant 2, mRNA NM 152235 Homo sapiens splicing factor, arginine/serine-rich 8 (suppressor-of-white-apr NM\_152236 Homo sapiens growth arrest-specific 2 like 1 (GAS2L1), transcript variant 2, i NM 152237 Homo sapiens growth arrest-specific 2 like 1 (GAS2L1), transcript variant 3, i NM\_152238 Homo saplens sorting nexin 7 (SNX7), transcript variant 2, mRNA NM\_152240 Homo sapiens p53 target zinc finger protein (WIG1), transcript variant 2, mR NM 152243 Homo sapiens CDC42 effector protein (Rho GTPase binding) 1 (CDC42EP1) NM\_152244 Homo sapiens sorting nexh 11 (SNX11), transcript variant 1, mRNA NM 152245 Homo saplens carnitine palmitoyitransferase 1B (muscle) (CPT1B), nuclear g NM 152246 Homo sapiens carnitine palmitovitransferase 1B (muscle) (CPT1B), nuclear of NM 152247 Homo sapiens carnitine palmitoyltransferase 1B (muscle) (CPT1B), nuclear of NM 152250 Homo sapiens defensin, beta 105 (DEFB105), mRNA NM 152251 Homo saplens defensin, beta 106 (DEFB106), mRNA NM\_152253 Homo sapiens choline kinase beta (CHKB), transcript variant 2, mRNA NM\_152255 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSI NM 152257 Homo sapiens KIAA0889 protein (KIAA0889), mRNA NM 152259 Homo saplens leucine-rich repeat kinase 1 (MGC45866), mRNA NM 152260 Homo sabiens chromosome 15 open reading frame 19 (C15orf19), mRNA NM 152261 Homo sapiens hypothetical protein MGC17943 (MGC17943), mRNA NM 152262 Homo sapiens zinc finger protein 439 (ZNF439), mRNA NM 152263 Homo sapiens tropomyosin 3 (TPM3), mRNA NM 152264 Homo sapiens solute carrier family 39 (zinc transporter), member 13 (SLC39) NM 152266 Homo sapiens hypothetical protein MGC32020 (MGC32020), mRNA NM 152267 Homo sapiens hypothetical protein FLJ38628 (FLJ38628), mRNA NM 152268 Homo sapiens similar to tRNA synthetase class II (DKFZp727A071), mRNA NM 152269 Homo sapiens hypothetical protein FLJ38663 (FLJ38663), mRNA NM 152270 Homo sapiens hypothetical protein FLJ34922 (FLJ34922), mRNA

NM 152271 Homo sapiens hypothetical protein FLJ23749 (FLJ23749), mRNA

NM 152272 Homo sapiens hypothetical protein MGC29816 (MGC29816), mRNA NM\_152274 Homo sapiens hypothetical protein MGC29729 (MGC29729), mRNA NM 152275 Homo sapiens hypothetical protein FLJ13946 (FLJ13946), mRNA NM 152277 Homo sapiens dendritic cell-denved ubiquitin-like protein (DC-UbP), mRNA NM 152278 Homo sapiens hypothetical protein MGC23947 (MGC23947), mRNA NM 152279 Homo sapiens zinc finger protein 585B (ZNF585B), mRNA NM 152280 Homo sapiens synaptotagmin XI (SYT11), mRNA NM 152281 Homo sapiens NTKL-binding protein 1 (FLJ11752), mRNA NM 152282 Homo sapiens hypothetical protein FLJ23751 (FLJ23751), mRNA NM 152283 Homo sapiens zinc finger protein 62 homolog (mouse) (ZFP62), mRNA NM 152284 Homo sapiens Snf7 homologue associated with Alix 3 (Shax3), mRNA NM 152285 Homo sapiens arrestin domain containing 1 (ARRDC1), mRNA NM\_152286 Homo sapiens chromosome 9 open reading frame 111 (C9orf111), mRNA NM\_152287 Homo sapiens zinc finger protein 276 homolog (mouse) (ZFP276), mRNA NM 152288 Homo sapiens hypothetical protein MGC13024 (MGC13024), mRNA NM 152289 Homo sapiens zinc finger protein 561 (ZNF561), mRNA NM 152290 Homo sapiens hypothetical protein MGC35194 (MGC35194), mRNA NM 152291 Homo sapiens mucin 7, salivary (MUC7), mRNA NM 152292 Homo sapiens RNA (quanine-9-) methyltransferase domain containing 2 (RG NM 152295 Homo sapiens threonyl-tRNA synthetase (TARS), mRNA NM 152296 Homo sapiens ATPase, Na+/K+ transporting, alpha 3 polypeptide (ATP1A3), NM\_152298 Homo saplens nuclear autoantigenic sperm protein (histone-binding) (NASP) NM 152299 Homo sapiens hypothetical protein 384D8\_6 (384D8-2), mRNA NM 152300 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 52 (DDX52), transc NM 152301 Homo sapiens PP784 protein (PP784), transcript variant 1, mRNA NM\_152302 Homo sapiens chromosome 20 open reading frame 158 (C20orf158), mRNA NM\_152303 Homo sapiens zinc finger protein 554 (ZNF554), mRNA NM 152304 Homo sapiens hypothetical protein MGC45806 (MGC45806), mRNA NM 152305 Homo sapiens x 010 protein (MDS010), mRNA NM 152306 Homo sapiens ubiquitin-like, containing PHD and RING finger domains, 2 (UI NM 152307 Homo sapiens hypothetical protein FLJ40452 (FLJ40452), mRNA NM 152308 Homo sapiens hypothetical protein MGC24665 (MGC24665), mRNA NM 152309 Homo sapiens phosphoinositicle-3-kinase adaptor protein 1 (PIK3AP1), mRN NM\_152310 Homo sapiens elongation of very long chain fatty acids (FEN1/Elo2, SUR4/El NM\_152311 Homo sapiens hypothetical protein MGC32871 (MGC32871), mRNA NM\_152312 Homo sapiens glycosyltransferase-like 1B (GYLTL1B), mRNA NM 152313 Homo sapiens solute camer family 36 (proton/amino acid symporter), member NM 152314 Homo sapiens hypothetical protein MGC34830 (MGC34830), mRNA NM 152315 Homo sapiens hypothetical protein MGC34290 (MGC34290), mRNA NM 152316 Homo sapiens hypothetical protein FLJ38968 (FLJ38968), mRNA NM 152317 Homo sapiens DEP domain containing 4 (DEPDC4), mRNA NM 152318 Homo sapiens hypothetical protein MGC40397 (MGC40397), mRNA NM\_152319 Homo sapiens hypothetical protein MGC35033 (MGC35033), mRNA NM\_152320 Homo sapiens hypothetical protein FLJ31295 (FLJ31295), mRNA NM 152321 Homo sapiens hypothetical protein FLJ32115 (FLJ32115), mRNA NM 152322 Homo sapiens BTB (POZ) domain containing 11 (BTBD11), mRNA NM\_152323 Homo sapiens Spi-C transcription factor (Spi-1/PU.1 related) (SPIC), mRNA NM 152324 Homo sapiens hypothetical protein MGC35169 (MGC35169), mRNA NM\_152325 Homo sapiens hypothetical protein MGC40178 (MGC40178), mRNA NM 152326 Homo sapiens ankyrin repeat domain 9 (ANKRD9), mRNA NM 152327 Homo sapiens adenylate kina se 7 (AK7), mRNA NM 152328 Homo sapiens adenylosuccinate synthase like 1 (ADSSL1), transcript variant NM\_152329 Homo sapiens peptidylprolyl isomerase (cyclophilin) like 5 (PPIL5), transcript NM 152330 Homo sapiens chromosome 1.4 open reading frame 31 (C14orf31), mRNA

NM\_152331 Homo sapiens peroxisomal acyl-CoA thioesterase 2B (PTE2B), mRNA NM\_152332 Homo sapiens membrane targeting (tandem) C2 domain containing 1 (MTAC NM\_152333 Homo sapiens solute carrier/family 25, member 29 (SLC25A29), mRNA

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NM 152334 Homo sapiens FLJ25005 protein (FLJ25005), mRNA NM\_152335 Homo sapiens chromosome 15 open reading frame 27 (C15orf27), mRNA NM 152336 Homo sapiens hypothetical protein FLJ32310 (FLJ32310), mRNA NM 152337 Homo sapiens hypothetical protein FLJ32702 (FLJ32702), mRNA NM 152338 Homo sapiens zymogen granule protein 16 (ZG16), mRNA NM 152339 Homo sapiens hypothetical protein MGC26885 (MGC26885), mRNA NM 152340 Homo sapiens hypothetical protein FLJ39075 (FLJ39075), mRNA NM 152341 Homo sapiens progestin and adipoQ receptor family member IV (PAQR4), m NM 152342 Homo sapiens chromodomain protein, Y-like 2 (CDYL2), mRNA NM 152343 Homo sapiens hypothetical protein FLJ25414 (FLJ25414), mRNA NM 152344 Homo sapiens hypothetical protein FLJ30656 (FLJ30656), mRNA NM 152345 Homo sapiens hypothetical protein FLJ25555 (FLJ25555), mRNA NM\_152346 Homo sapiens hypothetical protein MGC34680 (MGC34680), mRNA NM\_152347 Homo sapiens hypothetical protein FLJ40342 (FLJ40342), mRNA NM\_152348 Homo sapiens hypothetical protein FLJ33817 (FLJ33817), mRNA NM 152349 Homo sapiens hypothetical protein MGC45562 (MGC45562), mRNA NM 152350 Homo saplens hypothetical protein MGC40157 (MGC40157), mRNA NM 152351 Homo sapiens solute carrier family 5 (sodium/glucose cotransporter), membe NM 152352 Homo sapiens chromosome 18 open reading frame 19 (C18orf19), mRNA NM 152353 Homo saplens hypothetical protein MGC33839 (MGC33839), mRNA NM 152354 Homo sapiens zinc finger protein 285 (ZNF285), mRNA NM 152355 Homo sapiens zinc finger protein 441 (ZNF441), mRNA NM\_152356 Homo sapiens zinc finger protein 491 (ZNF491), mRNA NM\_152357 Homo sapiens zinc finger protein 440 (ZNF440), mRNA NM 152358 Homo sapiens hypothetical protein MGC33947 (MGC33947), mRNA NM\_152359 Homo sapiens carnitine palmitoyltransferase 1C (CPT1C), mRNA NM\_152360 Homo sapiens zinc finger protein 573 (ZNF573), mRNA NM 152361 Homo saplens hypothetical protein FLJ38944 (FLJ38944), mRNA NM 152362 Homo sapiens hypothetical protein MGC17791 (MGC17791), mRNA NM 152363 Homo sapiens hypothetical protein FLJ39369 (FLJ39369), mRNA NM 152365 Homo sapiens hypothetical protein FLJ34633 (FLJ34633), mRNA NM 152366 Homo saplens hypothetical protein MGC33338 (MGC33338), mRNA NM\_152367 Homo sapiens hypothetical protein FLJ38716 (FLJ38716), mRNA NM\_152369 Homo sapiens hypothetical protein MGC45474 (MGC45474), mRNA NM\_152371 Homo sapiens hypothetical protein MGC26818 (MGC26818), mRNA NM\_152372 Homo sapiens myomesin family, member 3 (MYOM3), mRNA NM 152373 Homo sapiens hypothetical protein MGC27466 (MGC27466), mRNA NM 152374 Homo sapiens hypothetical protein FLJ38984 (FLJ38984), mRNA NM 152375 Homo sapiens hypothetical protein FLJ38753 (FLJ38753), mRNA NM 152376 Homo sapiens UBX domain containing 3 (UBXD3), mRNA NM\_152377 Homo sapiens hypothetical protein MGC34837 (MGC34837), mRNA NM 152378 Homo sapiens hypothetical protein FLJ31052 (FLJ31052), mRNA NM 152379 Homo sapiens hypothetical protein DKFZp547B1713 (DKFZp547B1713), mF NM 152382 Homo sapiens hypothetical protein FLJ37953 (FLJ37953), mRNA NM 152383 Homo sapiens hypothetical protein MGC42174 (MGC42174), mRNA NM 152384 Homo sapiens Bardet-Biedl syndrome 5 (BBS5), mRNA NM 152385 Homo sapiens hypothetical protein FLJ31438 (FLJ31438), mRNA NM 152386 Homo sapiens sphingosine-1-phosphate phosphotase 2 (SGPP2), mRNA NM 152387 Homo sapiens hypothetical protein FLJ31322 (FLJ31322), mRNA NM 152388 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM 152389 Homo sapiens hypothetical protein MGC35338 (MGC35338), mRNA NM 152390 Homo saplens hypothetical protein MGC33926 (MGC33926), mRNA NM 152391 Homo sapiens chromosome 2 open reading frame 22 (C2orf22), mRNA NM 152392 Homo sapiens AHA1, activator of heat shock 90kDa protein ATPase homolog

NM\_152393 Homo sapiens kelch repeat and BTB (POZ) domain containing 5 (KBTBD5), NM\_152394 Homo sapiens hypothetical protein MGC39662 (MGC39662), mRNA NM\_152395 Homo sapiens hypothetical protein FLJ31265 (FLJ31265), mRNA WC05944981 [file:///E:/WC05944981.qpd]

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NM 152396 Homo sapiens hypothetical protein MGC24132 (MGC24132), mRNA NM 152397 Homo sapiens hypothetical protein MGC39725 (MGC39725), mRNA NM\_152398 Homo sapiens hypothetical protein MGC45416 (MGC45416), mRNA NM\_152399 Homo sapiens hypothetical protein FLJ3O834 (FLJ30834), mRNA NM 152400 Homo sapiens hypothetical protein FLJ39370 (FLJ39370), mRNA NM 152401 Homo sapiens phosducin-like 2 (PDCL2), mRNA NM 152402 Homo sapiens translocation associated membrane protein 1-like 1 (TRAM1L NM 152403 Homo sapiens hypothetical protein FLJ39155 (FLJ39155), transcript variant NM\_152404 Homo sapiens hypothetical protein FLJ34658 (FLJ34658), mRNA NM\_152405 Homo sapiens junction-mediating and regulatory protein (JMY), mRNA NM 152407 Homo sapiens GroE-like 2, mitochondria I (E, coli) (GRPEL2), mRNA NM\_152408 Homo sapiens hypothetical protein FLJ35779 (FLJ35779), mRNA NM\_152409 Homo sapiens hypothetical protein FLJ37562 (FLJ37562), mRNA NM 152410 Homo sapiens PARK2 co-regulated (PACRG), mRNA NM\_152411 Homo sapiens hypothetical protein DKFZp762I137 (DKFZp762I137), mRNA NM\_152412 Homo sapiens zinc finger protein 572 (ZNF572), mRNA NM 152413 Homo sapiens hypothetical protein MGC33309 (MGC33309), mRNA NM 152414 Homo saplens basic helix-loop-helix domain containing, class B, 5 (BHLHB5) NM 152415 Homo sapiens hepatocellular carcinoma related protein 1 (FLJ32642), mRNA NM\_152416 Homo sapiens hypothetical protein MGC40214 (MGC40214), mRNA NM 152417 Homo sapiens hypothetical protein FLJ32370 (FLJ32370), mRNA NM\_152418 Homo saplens hypothetical protein FLJ35775 (FLJ35775), mRNA NM\_152420 Homo sapiens chromosome 9 open reading frame 41 (C9orf41), mRNA NM\_152421 Homo sapiens hypothetical protein MGC20262 (MGC20262), mRNA NM\_152422 Homo sapiens protein tyrosine phosphatase domain containing 1 (PTPDC1). NM\_152423 Homo saplens hypothetical protein FLJ33516 (FLJ33516), mRNA NM\_152424 Homo sapiens hypothetical protein FLJ39827 (FLJ39827), mRNA NM 152425 Homo sapiens hypothetical protein FLJ40249 (FLJ40249), mRNA NM 152427 Homo sapiens cofilin pseudogene 1 (CFLP1), mRNA NM 152428 Home sapiens FERM and PDZ domain containing 2 (FRMPD2), mRNA NM 152429 Homo saplens chromosome 10 open rea ding frame 13 (C10orf13), mRNA NM 152430 Homo sapiens hypothetical protein MGC24137 (MGC24137), mRNA NM\_152431 Homo sapiens piwi-like 4 (Drosophila) (PIWIL4), mRNA NM\_152433 Homo sapiens kelch repeat and BTB (POZ) domain containing 3 (KBTBD3), NM\_152434 Homo saplens CWF19-like 2, cell cycle control (S. pombe) (CWF19L2), mRh NM\_152435 Homo sapiens hypothetical protein MGC35366 (MGC35366), mRNA NM\_152436 Homo sapiens hypothetical protein MGC39497 (MGC39497), mRNA NM\_152437 Homo saplens hypothetical protein DKFZ:p761B128 (DKFZp761B128), mRN, NM\_152439 Homo sapiens vitelliform macular dystrophy 2-like 3 (VMD2L3), mRNA NM\_152440 Homo saplens hypothetical protein FLJ32549 (FLJ32549), mRNA NM 152441 Homo sapiens F-box and leucine-rich repeat protein 14 (FBXL14), mRNA NM 152442 Homo sapiens RAD9 homolog B (S. cerevisiae) (RAD9B), mRNA NM 152443 Homo sapiens retinol dehydrogenase 12 (all-trans and 9-cis) (RDH12), mRN NM 152444 Homo saplens zinc binding alcohol dehydrogenase, domain containing 1 (ZA NM\_152445 Homo sapiens chromosome 14 open reading frame 44 (C14orf44), mRNA NM\_152447 Homo sapiens leucine rich repeat and fibronectin type III domain containing ! NM\_152448 Homo sapiens hypothetical protein MGC33951 (MGC33951), mRNA NM\_152449 Homo sapiens hypothetical protein FLJ33008 (FLJ33008), mRNA NM\_152450 Homo sapiens hypothetical protein MGC26690 (MGC26690), mRNA NM\_152451 Homo sapiens GRINL1A complex upstream protein (Gup1), mRNA NM 152453 Homo sapiens hypothetical protein MGC35118 (MGC35118), mRNA NM 152454 Homo sapiens hypothetical protein FLJ31461 (FLJ31461), mRNA

NM 152455 Homo sapiens hypothetical protein FLJ35867 (FLJ35867), mRNA NM 152456 Homo sapiens hypothetical protein MGC34647 (MGC34647), mRNA NM 152457 Homo sapiens zinc finger protein 597 (ZNF597), mRNA NM 152458 Homo sapiens hypothetical protein FLJ32 130 (FLJ32130), mRNA NM 152459 Homo sapiens hypothetical protein MGC45438 (MGC45438), mRNA

NM 152460 Homo sapiens hypothetical protein FLJ31882 (FLJ31882), mRNA NM 152461 Homo sapiens ER to nucleus signalling 1 (ERN1), transcript variant 2, mRNA NM 152462 Homo sapiens transmembrane protein 21A (TMEM21A), mRNA NM 152463 Homo sapiens essential meiotic endonuclease 1 homolog 1 (S. pombe) (EMI NM 152464 Homo sapiens chromosome 17 open reading frame 32 (C17orf32), mRNA NM 152465 Homo sapiens hypothetical protein MGC39650 (MGC39650), mRNA NM 152466 Homo sapiens hypothetical protein FLJ25168 (FLJ25168), mRNA NM 152467 Homo sapiens kelch-like 10 (Drosophila) (KLHL10), mRNA NM 152468 Homo sapiens epidermodysplasia verruciformis 2 (EVER2), mRNA NM 152470 Homo sapiens chromosome 18 open reading frame 23 (C18orf23), mRNA NM\_152472 Homo sapiens zinc finger protein 578 (ZNF578), mRNA NM 152473 Homo sapiens hypothetical protein FLJ32214 (FLJ32214), mRNA NM 152474 Homo sapiens chromosome 19 open reading frame 18 (C19orf18), mRNA NM 152475 Homo sapiens hypothetical protein MGC34079 (MGC34079), mRNA NM 152476 Homo sapiens zinc finger protein 560 (ZNF560), mRNA NM 152477 Homo sapiens zinc finger protein 565 (ZNF565), mRNA NM\_152478 Homo sapiens zinc finger protein 583 (ZNF583), mRNA NM 152479 Homo sapiens hypothetical protein MGC33962 (MGC33962), mRNA NM 152480 Homo sapiens chromosome 19 open reading frame 23 (C19orf23), mRNA NM 152481 Homo sapiens hypothetical protein FLJ25660 (FLJ25660), mRNA NM 152482 Homo sapiens chromosome 19 open reading frame 25 (C19orf25), mRNA NM\_152483 Homo sapiens hypothetical protein FLJ25328 (FLJ25328), mRNA NM 152484 Homo sapiens zinc finger protein 569 (ZNF569), mRNA NM 152485 Homo sapiens hypothetical protein FLJ25078 (FLJ25078), mRNA NM 152486 Homo sapiens sterile alpha motif domain containing 11 (SAMD11), mRNA NM\_152487 Homo sapiens hypothetical protein FLJ31842 (FLJ31842), mRNA NM 152488 Homo sapiens hypothetical protein FLJ32833 (FLJ32833), mRNA NM\_152489 Homo sapiens hypothetical protein MGC35130 (MGC35130), mRNA NM 152490 Homo sapiens beta 1,3-N-acety/galactosaminyltransferase-II (MGC39558), n NM 152491 Homo sapiens hypothetical protein FLJ32569 (FLJ32569), mRNA NM 152492 Homo saniens hypothetical protein FLJ32825 (FLJ32825), mRNA NM 152493 Homo sapiens FLJ25476 protein (FLJ25476), mRNA NM 152494 Homo sapiens hypothetical protein FLJ32785 (FLJ32785), mRNA NM 152495 Homo sapiens hypothetical protein FLJ38993 (FLJ38993), mRNA NM 152496 Homo sapiens hypothetical protein FLJ31434 (FLJ31434), mRNA NM 152497 Homo sapiens hypothetical protein FLJ32206 (FLJ32206), mRNA NM 152498 Homo saplens hypothetical protein FLJ32000 (FLJ32000), mRNA NM\_152499 Homo sapiens hypothetical protein MGC45441 (MGC45441), mRNA NM 152500 Homo saplens hypothetical protein FLJ33084 (FLJ33084), mRNA NM 152501 Homo sapiens interferon-inducible protein X (IFIX), transcript variant a1, mRI NM 152503 Homo saplens chromosome 20 open reading frame 132 (C20orf132), transci NM\_152504 Homo sapiens hypothetical protein FLJ25067 (FLJ25067), mRNA NM 152505 Home sapiens chromosome 21 open reading frame 13 (C21orf13), mRNA NM 152506 Home saplens chromosome 21 open reading frame 129 (C21orf129), mRNA NM 152507 Homo sapiens chromosome 21 open reading frame 128 (C21orf128), mRNA NM 152509 Homo saplens hypothetical protein FLJ31568 (FLJ31568), mRNA NM\_152510 Homo sapiens hypothetical protein MGC26710 (MGC26710), mRNA NM\_152511 Homo sapiens dual specificity phosphatase 18 (DUSP18), mRNA NM 152512 Homo sapiens hypothetical protein FLJ25421 (FLJ25421), mRNA NM 152515 Homo sapiens hypothetical protein FLJ40629 (FLJ40629), mRNA NM 152516 Homo sapiens copper metabolism (Murr1) domain containing 1 (COMMD1), NM 152517 Homo sapiens hypothetical protein FLJ30990 (FLJ30990), mRNA NM 152519 Homo sapiens hypothetical protein FLJ23861 (FLJ23861), mRNA NM 152520 Homo sapiens zinc finger protein 533 (ZNF533), mRNA

NM\_152522
 Homo sapiens ADP-ribosylation-like factor 6-interacting protein 6 (MGC3386)
 NM\_152523
 Homo sapiens hypothetical protein FLJ40432 (FLJ40432), mRNA
 NM\_152524
 Homo sapiens shugoshin-like 2 (S. pombe) (SGOL2), mRNA

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NM 152525 Homo sapiens hypothetical protein FLJ25351 (FLJ25351), mRNA NM 152526 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM 152527 Homo sapiens solute carrier family 16 (mornocarboxylic acid transporters), me NM 152528 Homo sapiens WD repeat and SAM domain containing 1 (WDSAM1), mRNA NM 152529 Homo sapiens G protein-coupled receptor 155 (GPR155), mRNA NM 152531 Homo sapiens hypothetical protein FLJ35155 (FLJ35155), mRNA NM 152533 Homo sapiens hypothetical protein MGC34728 (MGC34728), mRNA NM 152534 Homo sapiens hypothetical protein FLJ32685 (FLJ32685), mRNA NM\_152536 Homo sapiens FYVE, RhoGEF and PH domain containing 5 (FGD5), mRNA NM 152538 Homo sapiens immunoglobulin superfamily, member 11 (IGSF11), mRNA NM 152539 Homo sapiens hypothetical protein FLJ32859 (FLJ32859), mRNA NM 152540 Homo sapiens sec1 family domain containing 2 (SCFD2), mRNA NM 152542 Homo sapiens hypothetical protein DKFZp761G058 (DKFZp761G058), mRN NM 152543 Homo sapiens hypothetical protein FLJ25371 (FLJ25371), mRNA NM\_152544 Homo sapiens hypothetical protein FLJ35725 (FLJ35725), mRNA NM 152545 Homo sapiens RasGEF domain family, member 1B (RASGEF1B), mRNA NM 152546 Homo sepiens hypothetical protein FLJ25286 (FLJ25286), mRNA NM\_152547 Homo sapiens butyrophilin-like 9 (BTNL9), mRNA NM\_152548 Homo sapiens hypothetical protein FLJ25333 (FLJ25333), mRNA NM\_152549 Homo sapiens hypothetical protein MGC39633 (MGC39633), mRNA NM\_152550 Homo sapiens SH3 domain containing ring finger 2 (SH3RF2), mRNA NM 152551 Homo sapiens chromosome 6 open reading frame 151 (C6orf151), mRNA NM 152552 Homo saplens sterile alpha motif domain containing 3 (SAMD3), mRNA NM 152553 Homo sapiens IBR domain containing 1 (IBRDC1), mRNA NM 152554 Homo sapiens chromosome 6 open reading frame 195 (C6orf195), mRNA NM 152556 Homo sapiens hypothetical protein FLJ31818 (FLJ31818), mRNA NM\_152557 Homo sapiens hypothetical protein FLJ31413 (FLJ31413), mRNA NM\_152558 Homo saplens KIAA1023 protein (KIAA1023), mRNA NM\_152559 Homo sapiens Williams Beuren syndrome chromosome region 27 (WBSCR2 NM\_152562 Homo sapiens cell division cycle associated 2 (CDCA2), mRNA NM\_152563 Homo sapiens hypothetical protein FLJ10661 (FLJ10661), mRNA NM 152564 Homo sapiens Cohen syndrome 1 (COH1), transcript variant 1, mRNA NM\_152565 Homo sapiens ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d isofi NM\_152568 Homo sapiens hypothetical protein FLJ25169 (FLJ25169), mRNA NM 152569 Homo sapiens chromosome 9 open reading frame 66 (C9orf66), mRNA NM\_152570 Homo sapiens hypothetical protein FLJ31810 (FLJ31810), mRNA NM 152571 Homo sapiens hypothetical protein FLJ36779 (FLJ36779), mRNA NM 152572 Homo sapiens chromosome 9 open reading frame 98 (C9orf98), mRNA NM\_152573 Homo sapiens RAS and EF hand domain containing (RASEF), mRNA NM\_152574 Homo sapiens chromosome 9 open reading frame 52 (C9orf52), mRNA NM 152577 Homo sapiens hypothetical protein FLJ25735 (FLJ25735), mRNA NM\_152578 Homo sapiens fragile X mental retardation 1 neighbor (FMR1NB), mRNA NM\_152579 Homo sapiens hypothetical protein FLJ38564 (FLJ38564), mRNA NM 152581 Homo saplens motile sperm domain containing 2 (MOSPD2), mRNA NM 152582 Homo sapiens hypothetical protein MGC27005 (MGC27005), mRNA NM 152583 Homo sapiens hypothetical protein MGC40053 (MGC40053), mRNA NM 152584 Homo sapiens heat shock transcription factor, Y-linked 1 (HSFY1), transcript NM 152585 Homo sapiens RNA binding motif protein, Y-linked, family 1 (MGC33094), ml NM 152586 Homo sapiens ubiquitin specific protease 54 (USP54), mRNA NM\_152587 Homo sapiens hypothetical protein MGC33948 (MGC33948), mRNA NM\_152588 Homo sapiens hypothetical protein DKFZp762A217 (DKFZp762A217), mRN/ NM 152589 Homo sapiens hypothetical protein FLJ35821 (FLJ35821), mRNA NM 152590 Homo sapiens hypothetical protein FLJ36004 (FLJ36004), mRNA NM 152591 Homo sapiens hypothetical protein FLJ35843 (FLJ35843), mRNA

NM\_152592 Homo sapiens chromosome 14 open reading frame 49 (C14orf49), mRNA
 NM\_152594 Homo sapiens sprouty-related, EVH1 domain containing 1 (SPRED1), mRNA
 NM 152595 Homo sapiens piggyBac transposable element derived 4 (PGBD4), mRNA

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NM 152596 Homo saplens hypothetical protein MGC33637 (MGC33637), mRNA NM 152597 Homo sapiens fibrous sheath interacting protein 1 (FSIP1), mRNA NM 152598 Homo sapiens hypothetical protein FLJ35757 (FLJ35757), mRNA NM 152599 Homo sapiens hypothetical protein FLJ35773 (FLJ35773), mRNA NM 152600 Homo sapiens zinc finger protein 579 (ZNF 579), mRNA NM 152601 Homo sapiens hypothetical protein FLJ38281 (FLJ38281), mRNA NM 152602 Homo sapiens zinc finger protein 433 (ZNF433), mRNA NM 152603 Homo sapiens zinc finger protein 567 (ZNF 567), mRNA NM 152604 Homo sapiens zinc finger protein 383 (ZNF 383), mRNA NM 152605 Homo sapiens hypothetical protein FLJ37549 (FLJ37549), mRNA NM 152606 Homo sapiens zinc finger protein 540 (ZNF540), mRNA NM 152607 Homo sapiens hypothetical protein FLJ40201 (FLJ40201), mRNA NM 152608 Homo sapiens hypothetical protein FLJ35382 (FLJ35382), mRNA NM 152609 Homo sapiens hypothetical protein FLJ32001 (FLJ32001), mRNA NM 152610 Homo sapiens hypothetical protein FLJ35728 (FLJ35728), mRNA NM 152611 Homo sapiens chromosome 20 open reading frame 75 (C20orf75), mRNA NM 152612 Homo sapiens hypothetical protein FLJ36046 (FLJ36046), mRNA NM 152613 Homo saplens hypothetical protein MGC26816 (MGC26816), mRNA NM\_152614 Homo sapiens hypothetical protein MGC35154 (MGC35154), mRNA NM 152615 Homo sapiens hypothetical protein FLJ40597 (FLJ40597), mRNA NM 152616 Homo sapiens tripartite motif-containing 42 (TRIM42), mRNA NM 152617 Homo sapiens hypothetical protein FLJ35794 (FLJ35794), mRNA NM\_152618 Homo sapiens hypothetical protein FLJ35630 (FLJ35630), mRNA NM 152619 Homo sapiens hypothetical protein MGC45428 (MGC45428), mRNA NM 152620 Homo sapiens ring finger protein 129 (RNF129), mRNA NM 152621 Homo sapiens hypothetical protein MGC26963 (MGC26963), mRNA NM 152622 Homo sapiens hypothetical protein FLJ35954 (FLJ35954), mRNA NM 152623 Homo sapiens CDC20-like protein (FLJ37927), mRNA NM 152624 Homo saplens decapping enzyme hDcp2 (DCP2), mRNA NM 152625 Homo sapiens zinc finger protein 366 (ZNF 366), mRNA NM\_152626 Homo sapiens zinc finger protein 92 (HTF 12) (ZNF92), mRNA NM\_152628 Homo sapiens hypothetical protein MGC39715 (MGC39715), mRNA NM 152629 Homo saplens GLIS family zinc finger 3 (GLIS3), mRNA NM 152630 Homo sapiens hypothetical protein MGC26999 (MGC26999), mRNA NM\_152631 Homo sapiens hypothetical protein FLJ35782 (FLJ35782), mRNA NM\_152632 Homo saplens chromosome X open reading frame 22 (CXorf22), mRNA NM 152633 Homo sapiens hypothetical protein FLJ34064 (FLJ34064), mRNA NM 152635 Homo sapiens oncoprotein induced transcript 3 (OIT3), mRNA NM 152636 Homo saplens hypothetical protein FLJ33979 (FLJ33979), mRNA NM\_152637 Homo saplens hypothetical protein MGC17301 (MGC17301), mRNA NM 152638 Homo sapiens hypothetical protein MGC26598 (MGC26598), mRNA NM 152640 Homo sapiens decapping enzyme hDcp1b (DCP1B), mRNA NM\_152643 Homo sapiens kinase non-catalytic C-lobe domain (KIND) containing 1 (KND NM\_152644 Homo sapiens family with sequence similarity 24, member B (FAM24B), mRI NM 152647 Homo sapiens hypothetical protein FLJ32800 (FLJ32800), mRNA NM\_152649 Homo sapiens hypothetical protein FLJ34389 (FLJ34389), mRNA NM 152652 Homo saplens zinc finger protein 553 (ZNF553), mRNA NM 152653 Homo sapiens ubiquitin-conjugating enzyme E2E 2 (UBC4/5 homolog, yeast NM 152654 Homo sapiens hypothetical protein FLJ38607 (FLJ38607), mRNA NM 152655 Homo sapiens zinc finger protein 585A (ZNF585A), transcript variant 1, mRN NM 152657 Homo sapiens gametogenetin (GGN), transcript variant 1, mRNA NM 152658 Homo sapiens THAP domain containing 8 (THAP8), mRNA NM 152660 Homo sapiens hypothetical protein MGC34648 (MGC34648), mRNA NM 152662 Homo sapiens hypothetical protein FLJ23867 (FLJ23867), mRNA NM 152663 Homo sapiens Ral GEF with PH domain and SH3 binding motif 2 (RALGPS2 NM 152665 Homo sapiens hypothetical protein FLJ40873 (FLJ40873), mRNA

NM\_152666 Homo sapiens hypothetical protein FLJ40773 (FLJ40773), mRNA

NM 152667 Homo sapiens chromosome 20 open reading frame 147 (C20orf147), mRNA NM 152670 Homo sapiens hypothetical protein FLJ25369 (FLJ25369), mRNA NM 152671 Homo sapiens phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinas NM 152672 Homo sapiens organic solute transporter alpha (OSTalpha), mRNA NM 152673 Homo sapiens mucin 20 (MUC20), mRNA NM 152675 Homo sapiens hypothetical protein FLJ23754 (FLJ23754), mRNA NM 152676 Homo sapiens F-box protein 15 (FBXO15), mRNA NM\_152677 Homo sapiens zinc finger protein 494 (ZNF494), mRNA NM\_152678 Homo sapiens hypothetical protein FLJ34969 (FLJ34969), mRNA NM\_152679 Homo sapiens solute carrier family 10 (sodium/bile acid cotransporter family) NM\_152680 Homo sapiens hypothetical protein FLJ32028 (FLJ32028), mRNA NM 152681 Homo sapiens hypothetical protein FLJ38482 (FLJ38482), mRNA NM 152682 Homo sapiens hypothetical protein MGC10198 (MGC10198), mRNA NM 152683 Homo sapiens hypothetical protein FLJ33167 (FLJ33167), mRNA NM 152684 Homo sapiens hypothetical protein FLJ39653 (FLJ39653), mRNA NM 152685 Homo sapiens solute carrier family 23 (nucleobase transporters), member 1 NM 152686 Homo sapiens hypothetical protein MGC29463 (MGC29463), mRNA NM 152687 Homo sapiens hypothetical protein FLJ33641 (FLJ33641), mRNA NM\_152688 Homo saplens KH domain containing, RNA blinding, signal transduction asso NM\_152689 Homo saplens hypothetical protein MGC9712 (MGC9712), mRNA NM 152690 Homo sapiens dolichyl-phosphate mannosyltransferase polypeptide 2, regula NM 152692 Homo sapiens core 1 UDP-galactose:N-acetylgalactosamine-alpha-R beta 1. NM 152693 Homo sapiens hypothetical protein MGC34827 (MGC34827), mRNA NM\_152694 Homo sapiens zinc finger, CCHC domain containing 5 (ZCCHC5), mRNA NM 152695 Homo sapiens hypothetical protein FLJ23614 (FLJ23614), mRNA NM 152696 Homo sapiens homeodomain interacting protein kinase 1 (HIPK1), transcript NM 152697 Homo sapiens hypothetical protein MGC34032 (MGC34032), mRNA NM 152698 Homo sapiens hypothetical protein FLJ38377 (FLJ38377), mRNA NM 152699 Homo sapiens SUMO1/sentrin specific protease 5 (SENP5), mRNA NM\_152700 Homo sapiens hypothetical protein MGC26597 (MGC26597), mRNA NM\_152701 Homo sapiens ATP binding cassette gene, sub-family A (ABC1), member 13 NM\_152702 Homo sapiens chromosome 9 open reading frame 94 (C9orf94), mRNA NM 152704 Homo sapiens hypothetical protein FLJ25477 (FLJ25477), transcript variant \* NM\_152705 Homo sapiens hypothetical protein MGC9850 (MGC9850), mRNA NM 152706 Homo sapiens hypothetical protein MGC26647 (MGC26647), mRNA NM\_152707 Homo sapiens solute carrier family 25 (mito chondrial carrier; Graves disease NM\_152710 Homo sapiens chromosome 10 open reading frame 27 (C10orf27), mRNA NM 152713 Homo sapiens integral membrane protein 1 (ITM1), mRNA NM 152715 Homo sapiens hypothetical protein MGC10233 (MGC10233), mRNA NM 152716 Homo sapiens hypothetical protein FLJ36874 (FLJ36874), mRNA NM\_152717 Homo sapiens hypothetical protein MGC35295 (MGC35295), mRNA NM\_152718 Homo sapiens hypothetical protein FLJ32009 (FLJ32009), mRNA NM\_152719 Homo sapiens testis-specific leucine zipper protein nurit (NURIT), mRNA NM\_152720 Homo sapiens NIMA (never in mitosis gene a)-related kinase 3 (NEK3), trans NM\_152721 Homo sapiens docking protein 5-like (DOK5L), mRNA NM\_152722 Homo saplens hypothetical protein FLJ25530 (FLJ25530), mRNA NM 152723 Homo sapiens hypothetical protein FLJ38159 (FLJ38159), mRNA NM\_152724 Homo sapiens Ras suppressor protein 1 (RSU1), transcript variant 2, mRNA NM 152725 Homo sapiens solute carrier family 39 (zinc transporter), member 12 (SLC39 NM 152726 Homo sapiens Smhs2 homolog (rat) (FLJ34588), mRNA NM 152727 Homo sapiens copine II (CPNE2), mRNA NM\_152728 Homo sapiens chromosome 18 open reading frame 20 (C18orf20), mRNA NM\_152729 Homo sapiens 5'-nucleotidase, cytosolic II-like 1 (NT5C2L1), mRNA NM 152730 Homo sapiens chromosome 6 open reading frame 170 (C6orf170), mRNA NM 152731 Homo sapiens chromosome 6 open reading frame 65 (C6orf65), mRNA

NM\_152732 Homo sapiens chromosome 6 open reading frame 206 (C6orf206), mRNA NM\_152733 Homo sapiens BTB (POZ) domain containing 9 (BTBD9), mRNA

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NM 152734 Homo sapiens chromosome 6 open reading frame 89 (C6orf89), mRNA NM 152735 Homo sapiens zinc finger and BTB domain containing 9 (ZBTB9), mRNA NM 152736 Homo sapiens zinc finger protein 187 (ZNF187), mRNA NM 152737 Homo sapiens hypothetical protein MGC33993 (MGC33993), mRNA NM 152738 Homo sapiens hypothetical protein MGC40222 (MGC40222), mRNA NM 152739 Homo sapiens homeo box A9 (HOXA9), transcript variant 1, mRNA NM 152740 Homo sapiens 3-hydroxylsobutyrate dehydrogenase (HI BADH), mRNA NM\_152742 Homo sapiens glypican 2 (cerebroglycan) (GPC2), mRNA NM\_152743 Homo sapiens chromosome 7 open reading frame 27 (C7orf27), mRNA NM\_152744 Homo sapiens sidekick homolog 1 (chicken) (SDK1), mRNA NM\_152745 Homo sapiens neurexophilin 1 (NXPH1), mRNA NM 152747 Homo sapiens hypothetical protein DKFZp586I1420 (DKFZp586I1420), mRN NM 152748 Homo sapiens hypothetical protein FLJ31340 (FLJ31340), mRNA NM 152749 Homo sapiens hypothetical protein MGC33190 (MGC33190), mRNA NM 152750 Homo sapiens hypothetical protein FLJ23834 (FLJ23834), mRNA NM 152751 Homo sapiens chromosome 10 open reading frame 30 (C10orf30), mRNA NM 152753 Homo sapiens signal peptide, CUB domain, EGF-like 3 (SCUBE3), mRNA NM 152754 Homo sapiens sema domain, immunoglobulin domain (Ici), short basic doma NM 152755 Homo sapiens hypothetical protein MGC40499 (MGC40499), mRNA NM 152757 Homo sapiens hypothetical protein FLJ30313 (FLJ30313), mRNA NM\_152758 Homo sapiens YTH domain family 3 (YTHDF3), mRNA NM\_152759 Homo sapiens hypothetical protein MGC35140 (MGC35140), mRNA NM 152760 Homo saniens hypothetical protein FLJ30934 (FLJ30934), mRNA NM 152761 Homo saplens hypothetical protein FLJ25444 (FLJ25444), mRNA NM\_152762 Homo sapiens testis specific, 10 interacting protein (TSGA10IP), mRNA NM\_152763 Homo sapiens hypothetical protein MGC26989 (MGC26989), mRNA NM\_152764 Homo sapiens hypothetical protein MGC35212 (MGC35212), mRNA NM 152765 Homo sapiens hypothetical protein MGC33510 (MGC33510), mRNA NM 152766 Homo saplens hypothetical protein MGC40107 (MGC40107), mRNA NM 152769 Homo sapiens chromosome 19 open reading frame 26 (C19orf26), mRNA NM 152770 Homo sapiens hypothetical protein MGC35043 (MGC35043), mRNA NM\_152771 Homo sapiens chromosome 19 open reading frame 34 (C19orf34), mRNA NM 152772 Homo saplens hypothetical protein MGC40368 (MGC4O368), mRNA NM\_152773 Homo sapiens hypothetical protein MGC33212 (MGC33212), mRNA NM\_152774 Homo sapiens hypothetical protein MGC42090 (MGC42090), mRNA NM 152775 Homo sapiens hypothetical protein MGC33607 (MGC33607), mRNA NM 152776 Homo saplens hypothetical protein MGC40579 (MGC4O579), mRNA NM\_152777 Homo sapiens chromosome 14 open reading frame 48 (C14orf48), mRNA NM\_152778 Homo sapiens hypothetical protein MGC33302 (MGC33302), mRNA NM\_152779 Homo sapiens hypothetical protein MGC26856 (MGC26856), mRNA NM\_152780 Homo saplens hypothetical protein FLJ14503 (FLJ14503), mRNA NM 152781 Homo sapiens hypothetical protein FLJ32830 (FLJ32830), mRNA NM 152782 Homo sapiens hypothetical protein MGC33329 (MGC33329), mRNA NM\_152783 Homo sapiens hypothetical protein MGC25181 (MGC25181), mRNA NM\_152784 Homo saplens hypothetical protein MGC39581 (MGC39581), mRNA NM\_152785 Homo sapiens germinal center expressed transcript 2 (GCET2), mRNA NM\_152786 Homo sapiens chromosome 9 open reading frame 43 (C9orf43), mRNA NM\_152787 Homo sapiens TAK1-binding protein 3 (TAB3), transcript variant 1, mRNA NM 152788 Homo sapiens E2a-Pbx1-associated protein (EB-1), transcript variant 1, mR/ NM\_152789 Homo sapiens hypothetical protein MGC40405 (MGC4O405), mRNA NM\_152791 Homo sapiens zinc finger protein 555 (ZNF555), mRNA NM 152792 Homo sapiens hypothetical protein FLJ25084 (FLJ25084), mRNA NM 152793 Homo sapiens hypothetical protein Ells1 (Ells1), mRNA NM\_152794 Homo sapiens hypoxia inducible factor 3, alpha subunit (HIF3A), transcript va NM 152795 Homo sapiens hypoxia inducible factor 3, alpha subunit (HIF3A), transcript vi NM 152796 Homo sapiens hypoxia inducible factor 3, alpha subunit (HIF3A), transcript va NM 152826 Homo sapiens sorting nexin 1 (SNX1), transcript variant 3, mRNA

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NM 152827 Homo sapiens sorting nexin 3 (SNX3), transcript variant 2, mRNA NM 152828 Homo sapiens sorting nexin 3 (SNX3), transcript variant 3, mRNA NM 152829 Homo sapiens testis derived transcript (3 LIM domains) (TES), transcript vari NM 152830 Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 1 (A NM 152831 Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 1 (A NM 152832 Homo sapiens Mouse Mammary Turmor Virus Receptor homolog 1 (MTVR1) NM 152834 Homo sapiens transmembrane protein 18 (TMEM18), mRNA NM 152835 Homo sapiens casein kinase (LOC149420), mRNA NM 152836 Homo sapiens sorting nexin 16 (SNX16), transcript variant 2, mRNA NM 152837 Homo sapiens sorting nexin 16 (SNX16), transcript variant 3, mRNA NM\_152838 Homo sapiens RNA binding motif protein 12 (RBM12), transcript variant 2, m NM 152840 Homo sapiens Hermansky-Pudlak syndrome 4 (HPS4), transcript variant 3, r NM\_152841 Homo sapiens Hermansky-Pudlak syndrome 4 (HPS4), transcript variant 2, r NM 152842 Homo sapiens Hermansky-Pudlak syndrome 4 (HPS4), transcript variant 5, r NM\_152843 Homo sapiens Hermansky-Pudlak syndrome 4 (HPS4), transcript variant 4, r NM\_152850 Homo sapiens phosphatidylinositol glycan, class O (PIGO), transcript variant NM 152851 Homo sapiens membrane-spanning 4-domains, subfamily A, member 6A (Mi NM 152852 Homo sapiens membrane-spanning 4-domains, subfamily A, member 6A (MI NM 152854 Homo saplens tumor necrosis factor receptor superfamily, member 5 (TNFR: NM 152855 Homo sapiens immunoglobulin lambda-like polypeptide 1 (IGLL1), transcript NM 152856 Homo sapiens RNA binding motif protein 10 (RBM10), transcript variant 2, m NM\_152857 Homo sapiens Wilms tumor 1 associated protein (WTAP), transcript variant 2 NM 152858 Homo sapiens Wilms tumor 1 associated protein (WTAP), transcript variant ( NM 152860 Homo sapiens Sp7 transcription factor (SP7), mRNA NM 152862 Homo sapiens actin related protein 2/3 complex, subunit 2, 34kDa (ARPC2), NM 152864 Homo sapiens chromosome 20 open reading frame 58 (C20orf58), mRNA NM\_152866 Homo sapiens membrane-spanning 4-domains, subfamily A, member 1 (MS-NM\_152867 Homo saplens membrane-spanning 4-domains, subfamily A, member 1 (MS-NM 152868 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 4 NM 152869 Homo sapiens regucalcin (senescence marker protein-30) (RGN), transcript NM 152870 Homo sapiens abhydrolase domain containing 1 (ABHD1), transcript variant NM 152871 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR: NM 152872 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR! NM 152873 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR: NM 152874 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR) NM\_152875 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR) NM\_152876 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR: NM\_152877 Homo sapiens tumor necrosis factor receptor superfamily, member 6 (TNFR: NM 152878 Homo sapiens v-maf musculoaponeurotic fibrosarcoma oncogene homolog f NM\_152879 Homo sapiens diacylglycerol kinase, delta 130kDa (DGKD), transcript varian NM\_152880 Homo sapiens PTK7 protein tyrosine kinase 7 (PTK7), transcript variant PTK NM\_152881 Homo sapiens PTK7 protein tyrosine kinase 7 (PTK7), transcript variant PTK NM 152882 Homo sapiens PTK7 protein tyrosine kinase 7 (PTK7), transcript variant PTK NM 152883 Homo sapiens PTK7 protein tyrosine kinase 7 (PTK7), transcript variant PTK NM 152888 Homo sapiens collagen, type XXII, alpha 1 (COL22A1), mRNA NM 152889 Homo sapiens carbohydrate (chondroltin 4) sulfotransferase 13 (CHST13), rr NM 152890 Homo sapiens collagen, type XXIV, alpha 1 (COL24A1), mRNA NM 152891 Homo sapiens protease, serine, 33 (PRSS33), mRNA NM\_152892 Homo sapiens hypothetical protein DKFZp434K1815 (DKFZp434K1815), mF NM 152896 Homo sapiens ubiquitin-like, containing PHD and RING finger domains, 2 (U NM\_152897 Homo sapiens chromosome 20 open reading frame 161 (C20orf161), transcr NM\_152898 Homo sapiens Fer3-like (Drosophila) (FERD3L), mRNA NM 152899 Homo sapiens interleukin 4 induced 1 (IL4I1), transcript variant 1, mRNA NM 152900 Homo sapiens membrane-associated guanylate kinase-related (MAGI-3) (M/ Homo sapiens pyrin-domain containing protein 1 (PYC1), mRNA NM\_152901 NM 152902 Homo sapiens putative MAPK activating protein (MGC3794), mRNA

NM 152903 Homo sapiens kelch repeat and BTB (POZ) domain containing 6 (KBTBD6),

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NM 152904 Homo sapiens sperm antigen HCMOGT-1 (HCMOGT-1), mRINA NM 152905 Homo sapiens neural precursor cell expressed, developmentally down-regula NM\_152906 Homo sapiens hypothetical protein DKFZp761P1121 (DKFZp761P1121), mF NM 152908 Homo sapiens hypothetical protein FLJ31196 (FLJ31196), m RNA NM 152909 Homo sapiens zinc finger protein 548 (ZNF548), mRNA NM\_152910 Homo sapiens diacylglycerol kinase, eta (DGKH), transcript variant 1, mRNA NM 152911 Homo sapiens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM 152912 Homo sapiens mitochondrial translational initiation factor 3 (M/TIF3), mRNA NM 152913 Homo sapiens hypothetical protein DKFZp761L1417 (DKFZp761L1417), mR NM 152914 Homo sapiens transcript expressed during hematopoiesis 2 (MGC33894), ml NM\_152916 Homo sapiens egf-like module containing, mucin-like, hormome receptor-like NM 152917 Homo sapiens eqf-like module containing, mucin-like, hormome receptor-like NM 152918 Homo sapiens eqf-like module containing, mucin-like, hormone receptor-like NM 152919 Homo sapiens eqf-like module containing, mucin-like, hormone receptor-like NM 152920 Homo sapiens egf-like module containing, mucin-like, hormone receptor-like NM 152921 Homo sapiens egf-like module containing, mucin-like, hormome receptor-like NM 152924 Homo sapiens abhydrolase domain containing 2 (ABHD2), transcript variant NM 152925 Homo sapiens copine I (CPNE1), transcript variant 1, mRNA NM\_152926 Homo saplens copine I (CPNE1), transcript variant 2, mRNA NM 152927 Homo sapiens copine I (CPNE1), transcript variant 4, mRNA NM 152928 Homo sapiens copine I (CPNE1), transcript variant 5, mRNA NM 152929 Homo saplens copine I (CPNE1), transcript variant 6, mRNA NM 152930 Homo sapiens copine I (CPNE1), transcript variant 7, mRNA NM 152931 Homo sapiens copine I (CPNE1), transcript variant 8, mRNA NM 152932 Homo sapiens glycosyltransferase AD-017 (AD-017), transcript variant 1, mF NM 152933 Homo sapiens protein phosphatase, EF hand calcium-binding domain 2 (PPI NM 152934 Homo sapiens protein phosphatase, EF hand calcium-binding domain 2 (PPI NM\_152939 Homo sapiens egf-like module containing, mucin-like, hormorne receptor-like NM\_152942 Homo sapiens tumor necrosis factor receptor superfamily, member 8 (TNFR) NM\_152943 Homo sapiens zinc finger protein 268 (ZNF268), transcript variant B, mRNA NM\_152945 Homo sapiens developmentally regulated RNA-binding protein 1 (DRB1), mF NM 152988 Homo sapiens SPPL2b (SPPL2B), mRNA NM 152989 Homo saplens SRY (sex determining region Y)-box 5 (SOX5), transcript variations NM 152990 Homo sapiens peroxisomal, testis specific 1 (PXT1), mRNA NM 152991 Homo saplens embryonic ectoderm development (EED), transcript variant 2, NM 152992 Homo sapiens POM (POM121 homolog, rat) and ZP3 fusion (POMZP3), tran NM 152994 Homo sapiens smooth muscle myosin heavy chain 11 isoform SM1-like (LOC NM\_152995 Homo sapiens ovarian zinc finger protein (HOZFP), mRNA NM\_152996 Homo sapiens sialyltransferase 7 ((alpha-N-acetylneuraminyl-2,3-beta-galact NM\_152997 Homo sapiens chromosome 4 open reading frame 7 (C4orf7), mRNA NM\_152998 Homo sapiens enhancer of zeste homolog 2 (Drosophila) (EZH2), transcript NM\_152999 Homo sapiens six transmembrane epithelial antigen of prostate 2 (STEAP2), NM\_153000 Homo sapiens adenomatosis polyposis coli down-regulated 1 (APCDD1), mF NM 153001 Homo sapiens proteasome (prosome, macropain) 26S suburuit, ATPase, 4 (F NM 153002 Homo sapiens G protein-coupled receptor 156 (GPR156), mRNA NM 153003 Homo sapiens orofacial cleft 1 candidate 1 (OECC1), mRNA NM 153005 Homo sapiens RIO kinase 1 (yeast) (RIOK1), transcript variant 2, mRNA NM 153006 Homo sapiens N-acetylglutamate synthase (NAGS), mRNA NM\_153007 Homo sapiens outer dense fiber of sperm tails 4 (ODF4), mRNA NM\_153008 Homo sapiens hypothetical protein FLJ30277 (FLJ30277), m RNA NM 153010 Homo sapiens chromosome 18 open reading frame 16 (C18orf16), mRNA NM 153011 Homo sapiens hypothetical protein FLJ30594 (FLJ30594), m RNA NM 153012 Homo sapiens tumor necrosis factor (ligand) superfamily, merriber 12 (TNFS NM\_153013 Homo sapiens hypothetical protein FLJ30596 (FLJ30596), m RNA NM 153014 Homo sapiens hypothetical protein FLJ30634 (FLJ30634), m RNA NM 153015 Homo sapiens hypothetical protein FLJ30668 (FLJ30668), m RNA

NM\_153018 Homo sapiens hypothetical protein FLJ30726 (FLJ30726), m RNA

NM 153019 Homo sapiens transmembrane protease, serine 6 (TMPRSS6), mRNA NM 153020 Homo sapiens RNA binding motif protein 24 (RBM24), mRNA NM 153022 Homo sapiens hypothetical protein FLJ31166 (FLJ31166), mRNA NM 153023 Homo sapiens spermatogenesis associated 13 (SPATA13), mRNA NM 153024 Homo sapiens seven transmembrane helix receptor (FLJ31393), mRNA NM 153025 Homo sapiens hypothetical protein FLJ31606 (FLJ31606), mRNA NM 153026 Homo sapiens prickle-like 1 (Drosophila) (PRICKLE1), mRNA NM 153027 Homo sapiens hypothetical protein FLJ31659 (FLJ31659), mRNA NM\_153028 Homo sapiens zinc finger protein 75a (ZNF75A), mRNA NM 153029 Homo sapiens Nedd4 binding protein 1 (N4BP1), mRNA NM\_153031 Homo sapiens hypothetical protein FLJ32063 (FLJ32063), mRNA NM 153032 Homo sapiens hypothetical protein FLJ32065 (FLJ32065), mRNA NM 153033 Homo sapiens potassium channel tetramerisation domain containing 7 (KCT NM 153034 Homo sapiens zinc finger protein 488 (ZNF488), mRNA NM 153035 Homo sapiens hypothetical protein FLJ32112 (FLJ32112), mRNA NM 153036 Homo sapiens chromosome 6 open reading frame 78 (C6orf78), mRNA NM 153038 Homo sapiens hypothetical protein FLJ32447 (FLJ32447), mRNA NM 153040 Homo sapiens hypothetical protein FLJ32831 (FLJ32831), mRNA NM 153041 Homo sapiens hypothetical protein FLJ32955 (FLJ32955), mRNA NM 153043 Homo sapiens hypothetical protein FLJ37078 (FLJ37078), mRNA NM\_153044 Homo sapiens hypothetical protein FLJ35801 (FLJ35801), mRNA NM\_153045 Homo sapiens chromosome 9 open reading frame 91 (C9orf91), mRNA NM 153046 Homo sapiens tudor domain containing 9 (TDRD9), mRNA NM 153047 Homo saplens FYN oncogene related to SRC, FGR, YES (FYN), transcript ve NM 153048 Homo sapiens FYN oncogene related to SRC, FGR, YES (FYN), transcript vi NM\_153050 Homo saplens myotubularin related protein 3 (MTMR3), transcript variant 1, I NM\_153051 Homo saplens myotubularin related protein 3 (MTMR3), transcript variant 2, I NM 153181 Homo sapiens neuropilin (NRP) and tolloid (TLL)-like 1 (NETO1), transcript v NM 153182 Homo sapiens MYC Induced nuclear antigen (MINA), transcript variant 3, mF NM 153183 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 10 NM 153184 Homo sapiens immunoglobulin superfamily, member 4D (IGSF4D), mRNA NM\_153186 Homo sapiens ankyrin repeat domain 15 (ANKRD15), transcript variant 2, ml NM\_153187 Homo saplens solute carrier family 22 (organic cation transporter), member 1 NM\_153188 Homo sapiens transportin 1 (TNPO1), transcript variant 2, mRNA NM 153189 Homo sapiens sperm adhesion molecule 1 (PH-20 hyaluronidase, zona pellu NM 153191 Homo sapiens solute carrier family 22 (organic cation transporter), member 2 NM\_153200 Homo saplens endothelial differentiation-related factor 1 (EDF1), transcript vi NM 153201 Homo sapiens heat shock 70kDa protein 8 (HSPA8), transcript variant 2, mR NM 153202 Homo sapiens a disintegrin and metalloproteinase domain 33 (ADAM33), tra NM 153204 Homo sapiens chromosome 21 open reading frame 90 (C21orf90), mRNA NM 153206 Homo sapiens adhesion molecule AMICA (AMICA), mRNA NM\_153207 Homo sapiens AE binding protein 2 (AEBP2), mRNA NM 153208 Homo sapiens hypothetical protein MGC35048 (MGC35048), mRNA NM 153209 Homo sapiens hypothetical protein FLJ37300 (FLJ37300), mRNA NM\_153211 Homo sapiens chromosome 18 open reading frame 17 (C18orf17), mRNA NM\_153212 Homo sapiens gap junction protein, beta 4 (connexin 30.3) (GJB4), mRNA NM\_153213 Homo sapiens Rho guanine nucleotide exchange factor (GEF) 19 (ARHGEF NM\_153214 Homo sapiens hypothetical protein FLJ37440 (FLJ37440), mRNA NM 153215 Homo sapiens hypothetical protein FLJ38608 (FLJ38608), mRNA NM\_153216 Homo sapiens hypothetical protein FLJ25680 (FLJ25680), mRNA NM\_153217 Homo sapiens hypothetical protein MGC13034 (MGC13O34), mRNA NM 153218 Homo sapiens hypothetical protein FLJ38725 (FLJ38725), mRNA NM 153219 Homo sapiens zinc finger protein 524 (ZNF524), mRNA NM 153220 Homo sapiens hypothetical protein MGC35440 (MGC35440). mRNA NM 153221 Homo sapiens cartilage intermediate layer protein 2 (CILP2), mRNA NM 153223 Homo sapiens hypothetical protein FLJ36090 (FLJ36090), mRNA NM 153225 Homo sapiens RPE-spondin (RPESP), mRNA

NM 153226 Homo sapiens transmembrane protein 20 (TMEM20), mRNA NM 153228 Homo sapiens hypothetical protein FLJ38335 (FLJ38335), mRNA NM 153229 Homo sapiens hypothetical protein FLJ33318 (FLJ33318), mRNA NM 153230 Homo sapiens F-box protein 39 (FBXO39), mRNA NM 153231 Homo sapiens zinc finger protein 550 (ZNF550), mRNA NM 153232 Homo sapiens CREBBP/EP300 inhibitor 2 (CRI2), mRNA NM 153233 Homo sapiens hypothetical protein FLJ36445 (FLJ36445), mRNA NM 153234 Homo sapiens chromosome 5 open reading frame 11 (C5orf11), mRNA NM 153236 Homo sapiens immune associated nucleotide (hIAN7), mRNA NM 153238 Homo sapiens hypothetical protein MGC22001 (MGC22001), mRNA NM 153239 Homo sapiens hypothetical protein KIAA1924 (KIAA1924), mRNA NM 153240 Homo sapiens nephronophthisis 3 (adolescent) (NPHP3), mRNA NM 153244 Homo sapiens chromosome 10 open reading frame 111 (C10orf111), mRNA NM\_153246 Homo sapiens hypothetical protein MGC45491 (MGC45491), mRNA NM 153247 Homo sapiens solute carrier family 29 (nucleoside transporters), member 4 (-NM 153248 Homo saplens hypothetical protein MGC14276 (MGC14276), mRNA NM 153251 Homo sapiens hypothetical protein FLJ25952 (FLJ25952), mRNA NM\_153252 Homo sapiens bromo domain-containing protein disrupted in leukemla (BRO NM 153253 Homo sapiens signal-induced proliferation-associated gene 1 (SIPA1), transc NM 153254 Homo sapiens hypothetical protein FLJ36119 (FLJ36119), mRNA NM\_153255 Homo sapiens minichromosome maintenance deficient domain containing 1 NM 153256 Homo sapiens chromosome 10 open reading frame 47 (C10orf47), mRNA NM 153257 Homo sapiens gonadotropin inducible transcription repressor 1 (GIOT-1), mF NM 153260 Homo sapiens hypothetical protein FLJ36812 (FLJ36812), mRNA NM 153261 Homo saplens hypothetical protein FLJ38101 (FLJ38101), mRNA NM\_153262 Homo sapiens synaptotagmin XIV (SYT14), mRNA NM 153263 Homo sapiens zinc finger protein 549 (ZNF549), mRNA NM\_153264 Homo sapiens hypothetical protein FLJ35880 (FLJ35880). mRNA NM\_153265 Homo sapiens hypothetical protein FLJ35827 (FLJ35827). mRNA NM 153268 Homo saplens hypothetical protein MGC33486 (MGC33486), mRNA NM 153267 Homo saplens MAM domain containing 2 (MAMDC2), mRNA NM 153268 Homo saplens hypothetical protein FLJ31579 (FLJ31579), mRNA NM\_153269 Homo saplens chromosome 20 open reading frame 96 (C20orf96), mRNA NM 153270 Homo sapiens hypothetical protein FLJ34960 (FLJ34960), mRNA NM\_153271 Homo sapiens hypothetical protein MGC32065 (MGC32065), mRNA NM\_153273 Homo saplens inositol hexaphosphate kinase 1 (IHPK1), mRNA NM\_153274 Homo sapiens vitelliform macular dystrophy 2-like 2 (VMD2L2), mRNA NM 153276 Homo sapiens solute carrier family 22 (organic anion transporter), member 6 NM 153277 Homo saplens solute carrier family 22 (organic anion transporter), member 6 NM 153278 Homo saplens solute camer family 22 (organic anion transporter), member 6 NM 153279 Homo sapiens solute carrier family 22 (organic anion transporter), member 6 NM 153280 Homo sapiens ubiquitin-activating enzyme E1 (A1S9T and BN75 temperature NM\_153281 Homo saplens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 8, ml NM\_153282 Homo sapiens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 2, ml NM 153283 Homo saniens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 3, ml NM\_153284 Homo sapiens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 4, ml NM\_153285 Homo sapiens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 5, ml NM 153286 Homo sapiens hyaluronoglucosaminidase 1 (HYAL1), transcript variant 6, ml NM 153289 Homo sapiens defensin, beta 119 (DEFB119), transcript variant 1, mRNA NM 153290 Homo sapiens family with sequence similarity 10, member A4 (FAM10A4), m NM 153291 Homo sapiens family with sequence similarity 10, member A5 (FAM10A5), m NM 153292 Homo sapiens nitric oxide synthase 2A (inducible, hepatocytes) (NOS2A), tra NM 153320 Homo sapiens solute carrier family 22 (organic anion transporter), member 7 NM 153321 Homo sapiens peripheral myelin protein 22 (PMP22), transcript variant 2, mF NM\_153322 Homo sapiens peripheral myelin protein 22 (PMP22), transcript variant 3, mF

NM\_153324 Homo sapiens defensin, beta 123 (DEFB123), mRNA NM\_153325 Homo sapiens defensin, beta 125 (DEFB125), mRNA

NM\_153326 Homo sapiens aldo-keto reductase family 1, member A1 (aldehyde reductase NM\_153328 Homo sapiens retinoblastoma binding protein 9 (RBBP9), transcript variant 2 NM\_153329 Homo sapiens hypothetical protein MGC10204 (MGC10204), mRNA NM\_153330 Homo sapiens DnaJ (Hsp40) homolog, subfamily B, member 8 (DNAJB8), m NM\_153331 Homo sapiens potassium channel tetramerisation domain containing 6 (KCT NM\_153332 Homo sapiens 3' exoribonuclease (3'HEXO), mRNA NM\_153333 Homo sapiens hypothetical protein MGC45400 (MGC45400), mRNA NM\_153334 Homo sapiens scavenger receptor class F, member 2 (SCARF2), transcript \ NM\_153335 Homo sapiens protein kinase LYK5 (LYK5), mRNA NM\_153336 Homo sapiens chromosome 10 open reading frame 89 (C10orf89), mRNA NM 153337 Homo sapiens selectin ligand interactor cytoplasmic-1 (SLIC1), mRNA NM 153338 Homo sapiens hypothetical protein FLJ90165 (FLJ90165), mRNA NM\_153339 Homo sapiens hypothetical protein FLJ90811 (FLJ90811), mRNA NM\_153340 Homo sapiens hypothetical protein MGC46534 (MGC46534), mRNA NM\_153341 Homo sapiens IBR domain containing 3 (IBRDC3), mRNA NM\_153342 Homo sapiens fasting-inducible integral membrane protein TM6P1 (FLJ9002 NM\_153343 Homo sapiens ectonucleotide pyrophosphatase/phosphodiesterase 6 (ENPP NM\_153344 Homo sapiens chromosome 6 open reading frame 141 (C6orf141), mRNA NM\_153345 Homo sapiens hypothetical protein FLJ90586 (FLJ90586), mRNA NM\_153346 Homo sapiens chromosome X open reading frame 20 (CXorf20), mRNA NM\_153347 Homo sapiens hypothetical protein FLJ90119 (FLJ90119), mRNA NM\_153348 Homo sapiens F-box and WD-40 domain protein 8 (FBXW8), transcript varia NM 153350 Homo sapiens F-box and leucine-rich repeat protein 16 (FBXL16), m RNA NM\_153353 Homo sapiens hypothetical protein MGC27085 (MGC27085), mRNA NM\_153354 Homo sapiens hypothetical protein MGC33214 (MGC33214), mRNA NM 153355 Homo saplens T-cell lymphoma breakpoint associated target 1 (TCBA1), mR NM\_153356 Homo sapiens hypothetical protein MGC34741 (MGC34741), mRNA NM\_153357 Homo sapiens solute carrier family 16 (monocarboxylic acid transporters), may NM\_153358 Homo sapiens hypothetical protein FLJ90396 (FLJ90396), mRNA NM\_153359 Homo sapiens hypothetical protein MGC24975 (MGC24975), mRNA NM\_153360 Homo sapiens hypothetical protein FLJ90166 (FLJ90166), mRNA NM\_153361 Homo sapiens hypothetical protein MGC42105 (MGC42105), mRNA NM\_153362 Homo saplens protease, serine, 35 (PRSS35), mRNA NM\_153363 Homo sapiens hypothetical protein MGC42415 (MGC42415), mRNA NM\_153364 Homo sapiens hypothetical protein MGC39520 (MGC39520), mRNA NM 153365 Homo sapiens hypothetical protein FLJ90013 (FLJ90013), mRNA NM\_153367 Homo sapiens chromosome 10 open reading frame 56 (C10orf56), mRNA NM\_153368 Homo sapiens connexin40.1 (CX40.1), mRNA NM\_153369 Homo sapiens KIAA1919 (KIAA1919), mRNA NM\_153370 Homo sapiens protease inhibitor 16 (PI16), mRNA NM\_153371 Homo sapiens ligand of numb-protein X 2 (LNX2), mRNA NM\_153373 Homo sapiens hypothetical protein MGC15875 (MGC15875), mRNA NM\_153374 Homo saplens hypothetical protein MGC35274 (MGC35274), mRNA NM\_153375 Homo sapiens placenta-specific 2 (PLAC2), mRNA NM\_153376 Homo sapiens hypothetical protein FLJ90575 (FLJ90575), mRNA NM 153377 Homo saplens leucine-rich repeats and immunoglobulin-like domains 3 (LRIC NM 153378 Homo sapiens solute carrier family 22 (organic anion/cation transporter), mer NM\_153379 Homo sapiens kringle containing transmembrane protein 1 (KREMEN1), tran NM\_153380 Homo sapiens zinc finger protein 41 (ZNF41), transcript variant 2, m RNA NM\_153381 Homo sapiens pro-melanin-concentrating hormone-like 2 (PMCHL2), mRNA NM\_153425 Homo sapiens TNFRSF1A-associated via death domain (TRADD), transcript NM\_153426 Homo sapiens paired-like homeodomain transcription factor 2 (PITX2), transcription NM\_153427 Homo sapiens paired-like homeodomain transcription factor 2 (PITX2), trans-NM 153437 Homo sapiens outer dense fiber of sperm tails 2 (ODF2), transcript variant 2, NM 153442 Homo sapiens G protein-coupled receptor 26 (GPR26), mRNA NM 153443 Homo saplens killer cell immunoglobulin-like receptor, three domains, long c

NM 153444 Homo sapiens olfactory receptor, family 5, subfamily P, member 2 (OR5P2),

NM 153445 Homo sapiens olfactory receptor, family 5, subfamily P, member 3 (OR5P3), NM 153446 Homo sapiens UDP-GalNAc:Neu5Acalpha2-3Galbeta-R beta1,4-N-acetylgal: NM 153447 Homo sapiens NACHT, leucine rich repeat and PYD containing 5 (NALP5), n NM 153448 Homo sapiens extraembryonic, spermatogenesis, homeobox 1-like (ESX1L), NM 153449 Homo sapiens solute camer family 2 (facilitated glucose transporter), member NM 153450 Homo sapiens lung cancer metastasis-related protein 1 (LCMR1), mRNA NM 153451 Homo sapiens oral cancer overexpressed 1 (ORAOV1), mRNA NM\_153453 Homo sapiens vestigial like 2 (Drosophila) (VGLL2), transcript variant 2, mRt NM\_153454 Homo sapiens chromosome 21 open reading frame 86 (C21orf86), mRNA NM\_153456 Homo sapiens heparan sulfate 6-O-sulfotransferase 3 (HS6ST3), mRNA NM 153460 Homo sapiens interleukin 17 receptor C (IL17RC), transcript variant 2, mRN/ NM 153461 Homo sapiens interleukin 17 receptor C (IL17RC), transcript variant 1, mRN/ NM 153462 Homo sapiens interleukin 17 receptor C (IL17RC), transcript variant 4, mRN/ NM 153463 Homo sapiens interleukin 17 receptor C (IL17RC), transcript variant 5, mRN/ NM 153464 Homo sapiens interleukin enhancer binding factor 3, 90kDa (ILF3), transcript NM 153477 Homo sapiens ubiquitously-expressed transcript (UXT), transcript variant 1, r NM 153478 Homo sapiens chondrosarcoma associated gene 1 (CSAG1), transcript varia NM 153479 Homo sapiens chondrosarcoma associated gene 1 (CSAG1), transcript varia NM 153480 Homo sapiens interleukin 17 receptor E (IL17RE), transcript variant 1, mRNA NM 153481 Homo sapiens interleukin 17 receptor E (IL17RE), transcript variant 2, mRNA NM\_153482 Homo sapiens interleukin 17 receptor E (IL17RE), transcript variant 4, mRNA NM 153483 Homo sapiens interleukin 17 receptor E (IL17RE), transcript variant 5, mRNA NM 153485 Homo sapiens nucleoporin 155kDa (NUP155), transcript variant 1, mRNA NM\_153486 Homo sapiens lactate dehydrogenase D (LDHD), nuclear gene encoding mit NM 153487 Home sapiens MAM domain containing glycosylphosphatidylinositol anchor 1 NM 153488 Homo sapiens melanoma antigen, family A, 2B (MAGEA2B), mRNA NM 153490 Homo sapiens keratin 13 (KRT13), transcript variant 1, mRNA NM 153497 Homo sapiens mitogen-activated protein kinase kinase kinase 7 interacting p NM 153498 Homo sapiens calclum/calmodulin-dependent protein kinase ID (CAMK1D), t NM 153499 Homo saniens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM 153500 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM\_153603 Homo sapiens component of oligomeric golgi complex 7 (COG7), mRNA NM 153604 Homo saplens myocardin (MYOCD), mRNA NM\_153606 Homo sapiens hypothetical protein FLJ32796 (FLJ32796), mRNA NM 153607 Homo sapiens adult retina protein (LOC153222), mRNA NM 153608 Homo sapiens hypothetical protein MGC17986 (MGC17986), mRNA NM\_153609 Homo saplens transmembrane protease, serine 6 (TMPRSS6), mRNA NM\_153610 Homo sapiens cardiomyopathy associated 5 (CMYA5), mRNA NM 153611 Homo sapiens hypothetical protein MGC20446 (MGC20446), mRNA NM 153612 Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 5 (HS3S1 NM 153613 Homo saplens PISC domain containing hypothetical protein (LOC254531), m NM\_153614 Homo sapiens testis spermatogenesis apoptosis-related protein 6 (TSARG6) NM 153615 Homo sapiens Ral-GDS related protein Rgr (Rgr), mRNA NM\_153616 Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic NM 153617 Homo saplens sema domain, transmembrane domain (TM), and cytoplasmic NM\_153618 Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic NM\_153619 Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic NM 153620 Homo sapiens homeo box A1 (HOXA1), transcript variant 2, mRNA NM 153631 Homo sapiens homeo box A3 (HOXA3), transcript variant 2, mRNA NM\_153632 Homo sapiens homeo box A3 (HOXA3), transcript variant 3, mRNA NM 153633 Homo sapiens homeo box C4 (HOXC4), transcript variant 2, mRNA NM 153634 Homo sapiens copine VIII (CPNE8), mRNA NM 153635 Homo sapiens copine family member (LOC151835), mRNA NM\_153636 Homo sapiens copine VII (CPNE7), transcript variant 1, mRNA NM 153637 Homo sapiens pantothenate kinase 2 (Hallervorden-Spatz syndrome) (PANK NM 153638 Homo sapiens pantothenate kinase 2 (Hallervorden-Spatz syndrome) (PANK

NM 153639 Homo sapiens pantothenate kinase 2 (Hallervorden-Spatz syndrome) (PANK

NM 153640 Homo sapiens pantothenate kinase 2 (Hallervorden-Spatz syndrome) (PANK NM 153641 Homo sapiens pantothenate kinase 2 (Hallervorden-Spatz syndrome) (PANK NM 153645 Homo sapiens nucleoporin 50kDa (NUP50), transcript variant 3, mRNA NM\_153646 Homo sapiens solute carrier family 24 (sodium/potassium/calcium exchange) NM 153647 Homo sapiens solute carrier family 24 (sodium/potassium/calcium exchange) NM\_153648 Homo sapiens solute carrier family 24 (sodium/potassium/calcium exchange) NM\_153649 Homo sapiens tropomyosin 3 (TPM3), mRNA NM\_153675 Homo sapiens forkhead box A2 (FOXA2), transcript variant 2, mRNA NM 153676 Homo sapiens Usher syndrome 1C (autosomal recessive, severe) (USH1C), NM 153681 Homo sapiens Down syndrome critical region gene 5 (DSCR5), transcript val NM 153682 Homo sapiens Down syndrome critical region gene 5 (DSCR5), transcript vai NM 153683 Homo sapiens klotho (KL), transcript variant 2, mRNA NM 153684 Homo sapiens nucleoporin 50kDa (NUP50), transcript variant 1, mRNA NM 153685 Homo sapiens hypothetical protein DKFZp547D2210 (DKFZp547D2210), mF NM 153686 Homo sapiens transcription factor MLR1 (MLR1), mRNA NM 153687 Homo sapiens hypothetical protein FLJ31051 (FLJ31051), mRNA NM 153688 Homo sapiens zinc finger protein 1 homolog (mouse) (ZFP1), mRNA NM 153689 Homo sapiens hypothetical protein FLJ38973 (FLJ38973), mRNA NM\_153690 Homo sapiens family with sequence similarity 43, member A (FAM43A), mRI NM\_153691 Homo sapiens hypothetical protein FLJ90036 (FLJ90036), mRNA NM\_153692 Homo sapiens hypothetical protein FLJ90724 (FLJ90724), mRNA NM 153693 Homo saplens homeo box C6 (HOXC6), transcript variant 2, mRNA NM 153694 Homo sapiens synaptonemal complex protein 3 (SYCP3), mRNA NM 153695 Homo sapiens zinc finger protein 367 (ZNF367), mRNA NM 153696 Homo sapiens prostate-specific membrane antigen-like protein (PSMAL/GCF NM\_153697 Homo sapiens hypothetical protein DKFZp434D2328 (LOC91526), mRNA NM 153699 Homo saplens glutathione S-transferase A5 (GSTA5), mRNA NM 153700 Homo sapiens stereocilin (STRC), mRNA NM\_153701 Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), transcript variant 2, NM\_153702 Homo sapiens hypothetical protein MGC10084 (MGC10084), mRNA NM\_153703 Homo sapiens podocan (PODN), mRNA NM\_153704 Homo sapiens hypothetical protein MGC26979 (MGC26979), mRNA NM 153705 Homo sapiens KDEL (Lvs-Asp-Glu-Leu) containing 2 (KDELC2), mRNA NM 153706 Homo saplens hypothetical protein MGC33648 (MGC33648), mRNA NM 153707 Homo saplens chromosome 9 open reading frame 138 (C9orf138), mRNA NM 153708 Homo sapiens hypothetical protein MGC35450 (MGC35450), mRNA NM 153709 Homo sapiens hypothetical protein MGC40168 (MGC40168), mRNA NM 153711 Homo sapiens chromosome 6 open reading frame 188 (C6orf188), mRNA NM\_153712 Homo saplens tubulin tyrosine ligase (TTL), mRNA NM\_153713 Homo sapiens hypothetical protein MGC46719 (MGC46719), mRNA NM\_153714 Homo sapiens chromosome 10 open reading frame 67 (C10orf67), mRNA NM\_153715 Homo sapiens homeo box A10 (HOXA10), transcript variant 2, mRNA NM\_153716 Homo saplens heat shock transcription factor, Y linked 2 (HSFY2), transcript NM 153717 Homo sapiens Ellis van Creveld syndrome (EVC), transcript variant 2, mRNA NM 153718 Homo sapiens nucleoporin 62kDa (NUP62), transcript variant 3, mRNA NM 153719 Homo sapiens nucleoporin 62kDa (NUP62), transcript variant 1, mRNA NM 153741 Homo sapiens dolichyl-phosphate mannosyltransferase polypeptide 3 (DPM: NM 153742 Homo sapiens cystathionase (cystathlonine gamma-lyase) (CTH), transcript NM 153746 Homo sapiens zinc finger, DHHC domain containing 14 (ZDHHC14), mRNA NM\_153747 Homo sapiens phosphatidylinositol glycan, class C (PIGC), transcript variant NM\_153748 Homo sapiens potassium voltage-gated channel, Shaw-related subfamily, ma NM\_153750 Homo sapiens chromosome 21 open reading frame 81 (C21orf81), mRNA NM 153752 Homo sapiens chromosome 21 open reading frame 84 (C21orf84), mRNA NM\_153754 Homo sapiens chromosome 21 open reading frame 88 (C21orf88), mRNA NM\_153756 Homo sapiens fibronectin type III domain containing 5 (FNDC5), mRNA

NM\_153757 Homo sapiens nucleosome assembly protein 1-like 5 (NAP1L5), mRNA NM\_153758 Homo sapiens interleukin 19 (IL19), transcript variant 1, mRNA

NM\_153759 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 alpha (DNMT3A), trans NM\_153763 Homo sapiens potassium voltage-gated channel, Shaw-related subfamily, me NM 153764 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1 NM 153765 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1 NM 153766 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1 NM 153767 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1 NM 153768 Homo sapiens calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrou NM\_153769 Homo sapiens calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrou NM\_153770 Homo sapiens calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrou NM\_153773 Homo sapiens chromosome 21 open reading frame 99 (C21orf99), mRNA NM\_153809 Homo sapiens TAF1-like RNA polymerase II, TATA box binding protein (TBP NM\_153810 Homo sapiens chromosome 10 open reading frame 46 (C10orf46), mRNA NM 153811 Homo sapiens solute carner family 38, member 6 (SLC38A6), mRNA NM 153812 Homo sapiens PHD finger protein 13 (PHF13), mRNA NM 153813 Homo sapiens zinc finger protein, multitype 1 (ZFPM1), mRNA NM 153815 Homo sapiens Ras protein-specific guanine nucleotide-releasing factor 1 (R/ NM\_153816 Home sapiens sorting nexin 14 (SNX14), transcript variant 1, mRNA NM 153818 Homo sapiens peroxisome biogenesis factor 10 (PEX10), transcript variant 1 NM\_153819 Homo sapiens RAS guanyl releasing protein 2 (calcium and DAG-regulated) NM\_153822 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, NM\_153823 Homo sapiens germ cell associated 1 (GSG1), mRNA NM\_153824 Homo sapiens pyrroline-5-carboxylate reductase 1 (PYCR1), transcript variar NM 153825 Homo sapiens soluble liver antigen/liver pancreas antigen (SLA/LP), mRNA NM 153826 Homo saplens membrane cofactor protein (CD46, trophoblast-lymphocyte cr-NM 153827 Homo saplens misshapen/NIK-related kinase (MINK), transcript variant 3, mi NM\_153828 Homo sapiens reticulon 4 (RTN4), transcript variant 2, mRNA NM\_153831 Homo sapiens PTK2 protein tyrosine kinase 2 (PTK2), transcript variant 1, m NM 153832 Homo sapiens G protein-coupled receptor 161 (GPR161), mRNA NM 153833 Homo saplens H1 histone family, member O, oocyte-specific (H1FOO), mRN NM\_153834 Homo saplens G protein-coupled receptor 112 (GPR112), mRNA NM\_153835 Homo sapiens G protein-coupled receptor 113 (GPR113), mRNA NM 153836 Homo saplens cellular repressor of E1A-stimulated genes 2 (CREG2), mRN/ NM 153837 Homo saplens G protein-coupled receptor 114 (GPR114), mRNA NM\_153838 Homo sapiens G protein-coupled receptor 115 (GPR115), mRNA NM\_153839 Homo sapiens G protein-coupled receptor 111 (GPR111), mRNA NM 153840 Homo sapiens G protein-coupled receptor 110 (GPR110), mRNA NM 156036 Homo saplens homeo box B6 (HOXB6), transcript variant 3, mRNA NM 156037 Homo sapiens homeo box B6 (HOXB6), transcript variant 1, mRNA NM\_156038 Homo sapiens colony stimulating factor 3 receptor (granulocyte) (CSF3R), tra NM\_156039 Homo saplens colony stimulating factor 3 receptor (granulocyte) (CSF3R), tra NM\_170587 Homo saplens regulator of G-protein signalling 20 (RGS20), mRNA NM 170589 Homo saplens AF15c14 protein (AF15Q14), mRNA NM\_170600 Homo sapiens SH2 domain containing 3C (SH2D3C), mRNA NM 170601 Homo sapiens cytosolic sialic acid 9-O-acetylesterase homolog (CSE-C), mF NM 170602 Homo sapiens RAS quanti releasing protein 4 (RASGRP4), transcript variant NM 170603 Homo saplens RAS quanti releasing protein 4 (RASGRP4), transcript variant NM 170604 Homo sapiens RAS quant/ releasing protein 4 (RASGRP4), transcript variant NM 170605 Homo sapiens InaD-like protein (INADL), transcript variant 1, mRNA NM 170606 Homo sapiens myeloid/lymphoid or mixed-lineage leukemia 3 (MLL3), mRNA NM 170607 Homo sapiens transcription factor-like 4 (TCFL4), transcript variant 3, rnRNA NM 170609 Homo sapiens cysteine-rich secretory protein 1 (CRISP1), transcript variant 2 NM 170610 Homo sapiens histone 1, H2ba (HIST1H2BA), mRNA NM\_170662 Homo sapiens Cas-Br-M (murine) ecotropic retroviral transforming sequence NM 170663 Homo sapiens misshapen/NIK-related kinase (MINK), transcript variant 2, ml NM 170664 Homo sapiens otoancorin (OTOA), mRNA

NM\_170665 Homo sapiens ATPase, Ca++ transporting, cardiac muscle, slow twitch 2 (AT NM 170672 Homo sapiens RAS guanyl releasing protein 3 (calcium and DAG-regulated)

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NM 170674 Homo sapiens Meis1, myeloid ecotropic viral integration site 1 homolog 2 (m-
NM 170675 Homo sapiens Meis1, myeloid ecotropic viral integration site 1 homolog 2 (m
NM 170676 Homo sapiens Meis1, myeloid ecotropic viral integration site 1 homolog 2 (m-
NM_170677 Homo sapiens Meis1, myeloid ecotropic viral integration site 1 homolog 2 (m-
NM 170678 Homo sapiens integrin beta 1 binding protein 3 (ITGB1BP3), mRNA
NM 170679 Homo saplens S-phase kinase-associated protein 1A (p19A) (SKP1A), trans-
NM 170681 Homo sapiens mitochondrial elongation factor G2 (EFG2), nuclear gene ence
NM 170682 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 2 (P2RX2)
NM 170683 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 2 (P2RX2)
NM 170685 Homo sapiens tachykinin 4 (hemokinin) (TAC4), mRNA
NM 170686 Homo sapiens zinc finger protein 398 (ZNF398), transcript variant 1, mRNA
NM 170691 Homo sapiens mitochondrial elongation factor G2 (EFG2), nuclear gene enci
NM_170692 Homo sapiens RAS protein activator like 2 (RASAL2), transcript variant 2, ml
NM 170693 Homo sapiens serum/alucocorticoid regulated kinase 2 (SGK2), transcript va
NM 170694 Homo sapiens serine hydrolase-like (SERHL), mRNA
NM 170695 Homo sapiens TGFB-induced factor (TALE family homeobox) (TGIF), transcr
NM 170696 Homo saplens aldehyde dehydrogenase 1 family, member A2 (ALDH1A2), tr
NM 170697 Homo sapiens aldehyde dehydrogenase 1 family, member A2 (ALDH1A2), tr
NM 170698 Homo saplens similar to CGI-96 (dJ222E13.2), mRNA
NM 170699 Homo sapiens G protein-coupled bile acid receptor 1 (GPBAR1), mRNA
NM 170705 Homo sapiens isoprenylcysteine carboxyl methyltransferase (ICMT), transcrij
NM 170706 Homo sapiens nicotinamide nucleotide adenylyltransferase 2 (NMNAT2), trar
NM 170707 Homo sapiens lamin A/C (LMNA), transcript variant 1, mRNA
NM 170708 Homo sapiens lamin A/C (LMNA), transcript variant 3, mRNA
NM 170709 Homo saplens serum/glucocorticoid regulated kinase-like (SGKL), transcript
NM_170710 Homo sapiens WD repeat domain 17 (WDR17), transcript variant 1, mRNA
NM_170711 Homo sapiens DAZ associated protein 1 (DAZAP1), transcript variant 1, mRI
NM_170712 Homo saplens Ras association (RalGDS/AF-6) domain family 1 (RASSF1), to
NM 170713 Homo sapiens Ras association (RaIGDS/AF-6) domain family 1 (RASSF1), to
NM 170714 Homo sapiens Ras association (RaIGDS/AF-6) domain family 1 (RASSF1), to
NM 170715 Homo sapiens Ras association (RalGDS/AF-6) domain family 1 (RASSF1), to
NM 170716 Homo sapiens Ras association (RalGDS/AF-6) domain family 1 (RASSF1), to
NM 170717 Home sapiens Ras association (RalGDS/AF-6) domain family 1 (RASSF1), tr
NM 170719 Homo saplens chromosome 13 open reading frame 23 (C13orf23), transcript
NM 170720 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1
NM_170721 Homo sapiens musashi homolog 2 (Drosophila) (MSI2), transcript variant 2, i
NM_170722 Homo sapiens NOD9 protein (NOD9), transcript variant 2, mRNA
NM 170723 Homo sapiens chromodomain protein, Y-linked, 1 (CDY1), transcript variant
NM_170724 Homo sapiens polycystic kidney and hepatic disease 1 (autosomal recessive
NM_170725 Homo sapiens piggyBac transposable element derived 2 (PGBD2), mRNA
NM_170726 Homo sapiens aldehyde dehydrogenase 4 family, member A1 (ALDH4A1), n
NM 170731 Homo sapiens brain-derived neurotrophic factor (BDNF), transcript variant 3,
NM 170732 Homo sapiens brain-derived neurotrophic factor (BDNF), transcript variant 2,
NM 170733 Homo sapiens brain-derived neurotrophic factor (BDNF), transcript variant 5,
NM 170734 Homo sapiens brain-derived neurotrophic factor (BDNF), transcript variant 6,
NM 170735 Homo sapiens brain-derived neurotrophic factor (BDNF), transcript variant 1,
NM 170736 Homo sapiens potassium inwardiv-rectifying channel, subfamily J, member 1
NM 170737 Homo saplens potassium inwardly-rectifying channel, subfamily J, member 1
NM_170738 Homo sapiens mitochondrial ribosomal protein L11 (MRPL11), nuclear gene
NM_170739 Homo sapiens mitochondrial ribosomal protein L11 (MRPL11), nuclear gene
NM 170740 Homo sapiens aldehyde dehydrogenase 5 family, member A1 (succinate-ser
NM 170741 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1
NM_170742 Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 1
NM 170743 Homo sapiens interleukin 28 receptor, alpha (interferon, lambda receptor) (IL
NM 170744 Homo sapiens unc-5 homolog B (C. elegans) (UNC5B), mRNA
NM_170745 Homo sapiens histone 1, H2aa (HIST1H2AA), mRNA
NM 170746 Homo sapiens chromosome 11 open reading frame 31 (C11orf31), mRNA
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NM 170750 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase NM 170751 Homo sapiens chromodomain protein, Y-like (CDYL), transcript variant 2, mF NM\_170752 Homo sapiens chromodomain protein, Y-like (CDYL), transcript variant 3, mF NM 170753 Homo sapiens piggyBac transposable element derived 3 (PGBD3), mRNA NM 170754 Homo sapiens tensin like C1 domain containing phosphatase (TENC1), trans NM 170768 Homo sapiens zinc finger protein 91 homolog (mouse) (ZFP91), transcript va NM 170769 Homo sapiens ring finger protein 39 (RNF39), transcript variant 2, mRNA NM 170770 Homo sapiens ring finger protein 39 (RNF39), transcript variant 3, mRNA NM 170771 Homo sapiens aldehyde dehydrogenase 8 family, member A1 (ALDH8A1), tr NM 170773 Homo sapiens Ras association (RalGDS/AF-6) domain family 2 (RASSF2), to NM 170774 Homo sapiens Ras association (RalGDS/AF-6) domain family 2 (RASSF2), to NM 170775 Homo sapiens potassium intermediate/small conductance calcium-activated NM 170776 Homo sapiens G protein-coupled receptor 97 (GPR97), mRNA NM 170780 Homo sapiens MOX2 receptor (MOX2R), transcript variant 4, mRNA NM\_170781 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 11 (PPP1 NM 170782 Homo sapiens potassium intermediate/small conductance calcium-activated NM\_170783 Homo sapiens zinc ribbon domain containing, 1 (ZNRD1), transcript variant a NM 170784 Homo sapiens McKusick-Kaufman syndrome (MKKS), transcript variant 2, m NM 171825 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM\_171827 Homo sapiens CD8 antigen, alpha polypeptide (p32) (CD8A), transcript varia NM 171828 Homo sapiens potassium large conductance calcium-activated channel, subt NM 171829 Homo sapiens potassium large conductance calcium-activated channel, subl NM 171830 Homo saplens potassium large conductance calcium-activated channel, subl NM 171846 Homo sapiens lactamase, beta (LACTB), nuclear gene encoding mitochondr NM 171982 Homo sapiens tripartite motif-containing 35 (TRIM35), transcript variant 2, ml NM 171997 Homo sapiens ubiquitin specific protease 2 (USP2), transcript variant 2, mRI NM\_171998 Homo sapiens RAB39B, member RAS oncogene family (RAB39B), mRNA NM\_171999 Homo sapiens sal-like 3 (Drosophila) (SALL3), mRNA NM\_172000 Homo sapiens putative membrane protein HE9 (HE9), mRNA NM\_172002 Homo sapiens J-type co-chaperone HSC20 (HSC20), mRNA NM 172003 Homo sapiens COBW domain containing 2 (CBWD2), mRNA NM 172004 Homo saplens dendritic cell-associated lectin-1 (DCAL1), mRNA NM 172005 Homo sapiens WAP four-disulfide core domain 13 (WFDC13), mRNA NM 172006 Homo sapiens WAP four-disulfide core domain 10B (WFDC10B), transcript v NM 172014 Homo saplens tumor necrosis factor (ligand) superfamily, member 14 (TNFS NM\_172016 Homo sapiens tripartite motif-containing 39 (TRIM39), transcript variant 2, ml NM 172020 Homo saplens POM121 membrane glycoprotein (rat) (POM121), mRNA NM 172024 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 13 NM 172025 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 13 NM\_172026 Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 13 NM 172027 Homo saplens ankyrin repeat and BTB (POZ) domain containing 1 (ABTB1), NM 172028 Homo sapiens ankyrin repeat and BTB (POZ) domain containing 1 (ABTB1), NM 172037 Homo sapiens retinol dehydrogenase 10 (all-trans) (RDH10), mRNA NM 172056 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I NM 172057 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), i NM\_172058 Homo sapiens eyes absent homolog 1 (Drosophila) (EYA1), transcript varian NM\_172059 Homo sapiens eyes absent homolog 1 (Drosophila) (EYA1), transcript varian NM\_172060 Homo sapiens eyes absent homolog 1 (Drosophila) (EYA1), transcript varian NM\_172069 Homo sapiens pleckstrin homology domain containing, family H (with MyTH4 NM 172070 Homo sapiens similar to F10G7.10.p (KIAA2024), mRNA NM\_172078 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172079 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172080 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM\_172081 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172082 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172083 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172084 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II

NM\_172087 Homo sapiens tumor necrosis factor (ligand) superfamily, member 13 (TNFS NM 172088 Homo sapiens tumor necrosis factor (ligand) superfamily, member 13 (TNFS NM\_172089 Homo sapiens tumor necrosis factor (ligand) superfamily, member 12-member NM 172095 Homo sapiens cation channel, sperm associated 2 (CATSPER2), transcript v NM 172096 Homo sapiens cation channel, sperm associated 2 (CATSPER2), transcript v NM 172097 Homo sapiens cation channel, sperm associated 2 (CATSPER2), transcript v NM 172098 Homo sapiens eyes absent homolog 3 (Drosophila) (EYA3), transcript varian NM\_172099 Homo sapiens CD8 antigen, beta polypeptide 1 (p37) (CD8B1), transcript vai NM 172100 Homo sapiens CD8 antigen, beta polypeptide 1 (p37) (CD8B1), transcript vai NM\_172101 Homo sapiens CD8 antigen, beta polypeptide 1 (p37) (CD8B1), transcript vai NM\_172102 Homo sapiens CD8 antigen, beta polypeptide 1 (p37) (CD8B1), transcript vai NM\_172103 Homo sapiens eyes absent homolog 4 (Drosophila) (EYA4), transcript varian NM\_172104 Homo sapiens eyes absent homolog 4 (Drosophila) (EYA4), transcript varian NM 172105 Homo sapiens eves absent homolog 4 (Drosophila) (EYA4), transcript varian NM 172106 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, member NM 172107 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, member NM 172108 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, member NM 172109 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, member NM 172110 Homo sapiens eyes absent homolog 2 (Drosophila) (EYA2), transcript varian NM\_172111 Homo sapiens eyes absent homolog 2 (Drosophila) (EYA2), transcript varian NM\_172112 Homo sapiens eyes absent homolog 2 (Drosophila) (EYA2), transcript varian NM 172113 Homo sapiens eyes absent homolog 2 (Drosophila) (EYA2), transcript varian NM 172115 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172127 Homo saplens calclum/calmodulin-dependent protein kinase (CaM kinase) II NM 172128 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM\_172130 Homo sapiens potassium voltage-gated channel, shaker-related subfamily, b NM\_172131 Homo sapiens WAP four-disulfide core domain 10B (WFDC10B), transcript v NM 172138 Homo sapiens interleukin 28A (interferon, lambda 2) (IL28A), mRNA NM 172139 Homo sapiens interleukin 28B (interferon, lambda 3) (IL28B), mRNA NM 172140 Homo sapiens interleukin 29 (interferon, lambda 1) (IL29), mRNA NM\_172159 Homo sapiens potassium voltage-gated channel, shaker-related subfamily, b NM 172160 Homo sapiens potassium voltage-gated channel, shaker-related subfamily, b NM 172163 Home sapiens potassium voltage-gated channel, KQT-like subfamily, member NM\_172164 Homo sapiens nuclear autoantigenic sperm protein (histone-binding) (NASP) NM\_172165 Homo sapiens mutS homolog 5 (E. coli) (MSH5), transcript variant 2, mRNA NM\_172166 Homo sapiens mutS homolog 5 (E. coli) (MSH5), transcript variant 4, mRNA NM\_172167 Homo sapiens NADPH oxidase organizer 1 (NOXO1), transcript variant b, ml NM 172168 Homo sapiens NADPH oxidase organizer 1 (NOXO1), transcript variant c, ml NM 172169 Homo sapiens calcium/calmodulln-dependent protein kinase (CaM kinase) II NM 172170 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172171 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM\_172172 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM\_172173 Homo sapiens calcium/calmodulin-dependent protein kinase (CaM kinase) II NM 172174 Homo sapiens interleukin 15 (IL15), transcript variant 1, mRNA NM 172175 Homo sapiens interleukln 15 (IL15), transcript variant 2, mRNA NM 172177 Homo sapiens mitochondrial ribosomal protein L42 (MRPL42), nuclear gene NM 172178 Homo sapiens mitochondrial ribosomal protein L42 (MRPL42), nuclear gene NM 172193 Homo sapiens kelch domain containing 1 (KLHDC1), mRNA NM 172195 Homo sapiens eukaryotic translation initiation factor 2B, subunit 4 delta, 67kl NM 172196 Homo sapiens TFIIA-alpha/beta-like factor (ALF), transcript variant 2, mRNA NM 172197 Homo sapiens advanced glycosylation end product-specific receptor (AGER) NM 172198 Homo sapiens potassium voltage-gated channel, Shal-related subfamily, mei NM\_172199 Homo sapiens adenylate kinase 2 (AK2), transcript variant AK2C, mRNA NM\_172200 Homo sapiens interleukin 15 receptor, alpha (IL15RA), transcript variant 2, m NM 172201 Homo sapiens potassium voltage-gated channel, lsk-related family, member NM 172206 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 1, alpha NM 172207 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 1, alpha

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NM\_172208 Homo sapiens TAP binding protein (tapasin) (TAPBP), transcript variant 2, m NM 172209 Homo sapiens TAP binding protein (tapasin) (TAPBP), transcript variant 3, m NM 172210 Homo sapiens colony stimulating factor 1 (macrophage) (CSF1), transcript vi NM\_172211 Homo sapiens colony stimulating factor 1 (macrophage) (CSF1), transcript vi NM 172212 Homo sapiens colony stimulating factor 1 (macrophage) (CSF1), transcript vi NM 172213 Homo sapiens CD8 antigen, beta polypeptide 1 (p37) (CD8B1), transcript val NM\_172214 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM\_172215 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM\_172216 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM 172217 Homo sapiens interleukin 16 (lymphocyte chemoattractant factor) (IL16), tran-NM 172218 Homo sapiens sperm associated antigen 1 (SPAG1), transcript variant 2, mF NM 172219 Homo sapiens colony stimulating factor 3 (granulocyte) (CSF3), transcript va NM 172220 Homo sapiens colony stimulating factor 3 (granulocyte) (CSF3), transcript va NM 172225 Homo sapiens diencephalon/mesencephalon homeobox 1 (DMBX1), transcri NM\_172226 Homo sapiens calcium/calmodulin-dependent protein kinase kinase 2, beta ( NM\_172229 Homo sapiens kringle containing transmembrane protein 2 (KREMEN2), tran NM\_172230 Homo sapiens synovial apoptotis Inhibitor 1, synoviolin (SYVN1), transcript v NM 172231 Homo sapiens splicing factor 4 (SF4), transcript variant a, mRNA NM 172232 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 5 (ABC/ NM 172234 Homo saplens Interleukin 17 receptor B (IL17RB), transcript variant 2, mRNA NM 172236 Homo sapiens protein O-fucosyltransferase 1 (POFUT1), transcript variant 2. NM 172238 Homo sapiens transcription factor AP-2 beta (activating enhancer binding pro NM 172239 Homo sapiens exonuclease GOR (GOR), mRNA NM\_172240 Homo sapiens TUWD12 (TUWD12), mRNA NM 172241 Homo sapiens cutaneous T-cell lymphoma-associated antigen 1 (CTAGE1), NM\_172242 Homo sapiens sperm associated antigen 6 (SPAG6), transcript variant 2, mF NM\_172244 Homo sapiens sarcoglycan, delta (35kDa dystrophin-associated glycoprotein NM 172245 Homo sapiens colony stimulating factor 2 receptor, alpha, low-affinity (granul NM 172248 Home sapiens colony stimulating factor 2 receptor, alpha, low-affinity (granul NM 172247 Homo sapiens colony stimulating factor 2 receptor, alpha, low-affinity (granul NM 172248 Homo sapiens colony stimulating factor 2 receptor, alpha, low-affinity (granul NM\_172249 Homo sapiens colony stimulating factor 2 receptor, alpha, low-affinity (granul NM 172250 Homo sapiens methylmalonic aciduria (cobalamin deficiency) type A (MMAA) NM 172251 Homo saplens mitochondrial ribosomal protein L54 (MRPL54), nuclear gene NM\_172311 Homo sapiens stoned B/TFIIA-alpha/beta-like factor (SALF), mRNA NM 172312 Homo sapiens sperm associated antigen 8 (SPAG8), transcript variant 2, mF NM\_172313 Homo sapiens colony stimulating factor 3 receptor (granulocyte) (CSF3R), tra NM\_172314 Homo sapiens interleukin 17E (IL17E), transcript variant 2, mRNA NM\_172315 Homo saplens Mels1, myelold ecotropic viral integration site 1 homolog 2 (m NM 172316 Homo sapiens Mels1, myelold ecotropic viral integration site 1 homolog 2 (m-NM 172318 Homo sapiens potassium voltage-gated channel, subfamily G, member 1 (KC NM 172337 Homo sapiens orthodenticle homolog 2 (Drosophila) (OTX2), transcript varial NM 172341 Homo saplens presenilin enhancer 2 (PEN2), mRNA NM 172343 Homo sapiens interleukin 17F (IL17F), transcript variant 2, mRNA NM 172344 Homo sapiens potassium voltage-gated channel, subfamily G, member 3 (KC NM\_172345 Homo saplens sperm associated antigen 9 (SPAG9), transcript variant 2, mF NM\_172346 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 6 (ABC4 NM 172347 Homo sapiens potassium voltage-gated channel, subfamily G, member 4 (KC NM 172348 Homo saniens interleukin 4 (IL4), transcript variant 2, mRNA NM\_172349 Homo sapiens nuclear receptor binding SET domain protein 1 (NSD1), trans-NM 172350 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr-NM 172351 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr NM 172352 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr NM 172353 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr NM 172354 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr-NM 172355 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr

NM 172356 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr

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NM 172357 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr-
NM 172358 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr
NM 172359 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr-
NM 172360 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr
NM 172361 Homo sapiens membrane cofactor protein (CD46, trophoblast-lymphocyte cr
NM 172362 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), i
NM 172364 Homo sapiens calcium channel, voltage-dependent, alpha 2/delta subunit 4 (
NM 172365 Homo sapiens chromosome 14 open reading frame 50 (C14orf50), mRNA
NM 172366 Homo sapiens F-box protein 16 (FBXO16), mRNA
NM 172367 Homo sapiens tumor suppressor candidate 5 (TUSC5), mRNA
NM_172369 Homo sapiens complement component 1, q subcomponent, gamma polypep
NM_172370 Homo sapiens D-amino acid oxidase activator (DAOA), mRNA
NM_172373 Homo sapiens E74-like factor 1 (ets domain transcription factor) (ELF1), mRI
NM 172374 Homo sapiens interleukin 4 induced 1 (IL4I1), transcript variant 2, mRNA
NM_172375 Homo sapiens potassium voltage-gated channel, subfamily H (eaq-related), I
NM 172376 Homo saplens potassium voltage-gated channel, subfamily H (eag-related), I
NM 172377 Homo sapiens cancer/testis antigen 2 (CTAG2), transcript variant 1, mRNA
NM 172386 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 9 (ABC4)
NM 172387 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de
NM 172388 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de
NM 172389 Homo saplens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de
NM 172390 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de
NM 173039 Homo saplens aquaporin 11 (AQP11), mRNA
NM_173042 Homo saplens Interleukin 18 binding protein (IL18BP), transcript variant A, m
NM_173043 Homo sapiens interleukin 18 binding protein (IL18BP), transcript variant B, m
NM_173044 Homo sapiens interleukin 18 binding protein (IL18BP), transcript variant D, m
NM 173050 Homo sapiens signal peptide, CUB domain, EGF-like 1 (SCUBE1), mRNA
NM 173054 Homo saplens reelin (RELN), transcript variant 2, mRNA
NM 173055 Homo saplens zonadhesin (ZAN), transcript variant 1, mRNA
NM 173056 Homo sapiens zonadhesin (ZAN), transcript variant 2, mRNA
NM 173057 Homo sapiens zonadhesin (ZAN), transcript variant 4, mRNA
NM 173058 Homo saniens zonadhesin (ZAN), transcript variant 5, mRNA
NM 173059 Homo sapiens zonadhesin (ZAN), transcript variant 6, mRNA
NM_173060 Homo sapiens calpastatin (CAST), transcript variant 2, mRNA
NM 173061 Homo sapiens calpastatin (CAST), transcript variant 3, mRNA
NM_173062 Homo saplens calpastatin (CAST), transcript variant 4, mRNA
NM_173064 Homo sapiens Interleukin 28 receptor, alpha (interferon, lambda receptor) (IL
NM_173065 Homo sapiens interleukin 28 receptor, alpha (Interferon, lambda receptor) (IL
NM 173073 Homo sapiens solute carrier family 35, member C2 (SLC35C2), transcript va
NM 173074 Homo sapiens phosphatidylinositol glycan, class F (PIGF), transcript variant.
NM 173075 Homo saplens amyloid beta (A4) precursor protein-blnding, family B, membe
NM 173076 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 12 (ABC
NM_173077 Homo sapiens carboxypeptidase O (CPO), mRNA
NM 173078 Home sapiens SLIT and NTRK-like family, member 4 (SLITRK4), mRNA
NM 173079 Homo saplens RUN domain containing 1 (RUNDC1), mRNA
NM_173080 Homo sapiens small proline rich protein 4 (SPRR4), mRNA
NM_173081 Homo sapiens armadillo repeat containing 3 (ARMC3), mRNA
NM_173082 Homo sapiens SNF2 histone linker PHD RING helicase (SHPRH), mRNA
NM_173083 Homo sapiens TUDOR gene similar (TGS), mRNA
NM_173084 Homo sapiens tripartite motif-containing 59 (TRIM59), mRNA
NM_173086 Homo sapiens keratin 6E (KRT6E), mRNA
NM 173087 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 3, mRNA
NM 173088 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 4, mRNA
NM 173089 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 5, mRNA
NM_173090 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 6, mRNA
NM 173091 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de
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NM 173092 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I

NM 173156 Homo sapiens chromosome 1 open reading frame 16 (C1orf16), transcript ve NM 173157 Homo sapiens nuclear receptor subfamily 4, group A, member 1 (NR4A1), tra NM 173158 Homo sapiens nuclear receptor subfamily 4, group A, member 1 (NR4A1), tra NM 173159 Homo sapiens neuronal PAS domain protein 3 (NPAS3), mRNA NM 173160 Homo sapiens FXYD domain containing ion transport regulator 4 (FXYD4), π NM 173161 Homo sapiens interleukin 1 family, member 10 (theta) (IL1F10), transcript va NM 173162 Homo sapiens potassium voltage-gated channel, subfamily H (eag-related), I NM 173163 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de NM 173164 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de NM 173165 Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-de NM 173167 Homo sapiens cardiomyopathy associated 4 (CMYA4), mRNA NM\_173170 Homo sapiens interleukin 1 family, member 5 (delta) (IL1F5), transcript varial NM\_173171 Homo sapiens nuclear receptor subfamily 4, group A, member 2 (NR4A2), tra NM\_173172 Homo sapiens nuclear receptor subfamily 4, group A, member 2 (NR4A2), tra NM 173173 Homo sapiens nuclear receptor subfamily 4, group A, member 2 (NR4A2), tra NM 173174 Homo sapiens PTK2B protein tyrosine kinase 2 beta (PTK2B), transcript vari NM 173175 Homo sapiens PTK2B protein tyrosine kinase 2 beta (PTK2B), transcript vari NM 173176 Homo sapiens PTK2B protein tyrosine klnase 2 beta (PTK2B), transcript vari NM 173177 Homo sapiens nuclear DNA-binding protein (C1D), transcript variant 2, mRN. NM 173178 Homo sapiens interleukin 1 family, member 8 (eta) (IL1F8), transcript variant NM 173179 Homo sapiens solute carrier family 35, member C2 (SLC35C2), transcript va NM 173191 Homo sapiens Kv channel interacting protein 2 (KCNIP2), transcript variant 2 NM\_173192 Homo sapiens Kv channel interacting protein 2 (KCNIP2), transcript variant 3 NM 173193 Homo sapiens Ky channel interacting protein 2 (KCNIP2), transcript variant 4 NM 173194 Homo sapiens Ky channel Interacting protein 2 (KCNIP2), transcript variant 5 NM\_173195 Homo sapiens Kv channel interacting protein 2 (KCNIP2), transcript variant 6 NM\_173197 Homo sapiens Kv channel interacting protein 2 (KCNIP2), transcript variant 7 NM\_173198 Homo sapiens nuclear receptor subfamily 4, group A, member 3 (NR4A3), tra NM\_173199 Homo sapiens nuclear receptor subfamily 4, group A, member 3 (NR4A3), tra NM 173200 Homo sapiens nuclear receptor subfamily 4, group A, member 3 (NR4A3), tra NM 173201 Homo sapiens ATPase, Ca++ transporting, cardiac muscle, fast twitch 1 (ATI NM 173202 Homo sapiens interleukin 1 family, member 7 (zeta) (IL1F7), transcript variar NM 173203 Homo sapiens interleukin 1 family, member 7 (zeta) (IL1F7), transcript variar NM 173204 Homo saplens interleukin 1 family, member 7 (zeta) (IL1F7), transcript variar NM\_173205 Homo saplens interleukin 1 family, member 7 (zeta) (IL1F7), transcript variar NM 173206 Homo sapiens protein inhibitor of activated STAT, 2 (PIAS2), transcript varian NM 173207 Homo saplens TGFB-Induced factor (TALE family homeobox) (TGIF), transcr NM 173208 Homo sapiens TGFB-induced factor (TALE family homeobox) (TGIF), transcr NM 173209 Homo sapiens TGFB-Induced factor (TALE family homeobox) (TGIF), transci NM 173210 Homo sapiens TGFB-induced factor (TALE family homeobox) (TGIF), transcr NM 173211 Homo saplens TGFB-Induced factor (TALE family homeobox) (TGIF), transcr NM 173213 Homo sapiens keratin 23 (histone deacetylase Inducible) (KRT23), transcript NM 173214 Homo saplens nuclear factor of activated T-cells 5, tonicity-responsive (NFA NM 173215 Homo sapiens nuclear factor of activated T-cells 5, tonicity-responsive (NFA NM 173216 Homo sapiens sialyltransferase 1 (beta-galactoside alpha-2,6-sialyltransferas NM\_173217 Homo sapiens sialyltransferase 1 (beta-galactoside alpha-2,6-sialyltransferas NM 173341 Homo sapiens PHD finger protein 7 (PHF7), transcript variant 2, mRNA NM\_173342 Homo sapiens Kv channel interacting protein 2 (KCNIP2), transcript variant 8 NM\_173343 Homo sapiens interleukin 1 receptor, type II (IL1R2), transcript variant 2, mR NM 173344 Homo sapiens siglyttransferase 4A (beta-galactoside alpha-2,3-siglyttransfer NM 173351 Homo sapiens olfactory receptor, family 6, subfamily B, member 3 (OR6B3), NM\_173352 Homo sapiens keratin 5b (K5B), mRNA NM\_173353 Homo sapiens tryptophan hydroxylase 2 (TPH2), mRNA NM 173354 Homo sapiens SNF1-like kinase (SNF1LK), mRNA NM 173355 Homo sapiens uridine phosphorylase 2 (UPP2), mRNA NM 173357 Homo sapiens synovial sarcoma, X breakpoint 6 (SSX6), mRNA NM 173358 Homo sapiens synovial sarcoma, X breakpoint 7 (SSX7), mRNA

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NM 173360 Homo sapiens spermatogenesis associated 9 (SPATA9), transcript variant 2. NM 173362 Homo sapiens LOC317671 (LOC317671), mRNA NM 173452 Homo sapiens ficolin (collagen/fibringgen domain containing) 3 (Hakata antic NM 173454 Homo sapiens phosphodiesterase 8A (PDE8A), transcript variant 2, mRNA NM 173455 Homo sapiens phosphodiesterase 8A (PDE8A), transcript variant 3, mRNA NM 173456 Homo sapiens phosphodiesterase 8A (PDE8A), transcript variant 4, mRNA NM 173457 Homo sapiens phosphodiesterase 8A (PDE8A), transcript variant 5, mRNA NM 173459 Homo sapiens interleukin 1 receptor-like 1 (IL1RL1), transcript variant 3, mRI NM 173460 Homo sapiens defensin, beta 119 (DEFB119), transcript variant 2, mRNA NM 173462 Homo sapiens papilin, proteoglycan-like sulfated glycoprotein (PAPLN), mRN NM 173463 Homo sapiens hypothetical protein DKFZp761B107 (DKFZp761B107), mRN/ NM 173464 Homo sapiens I(3)mbt-like 4 (Drosophila) (L3MBTL4), mRNA NM 173465 Homo sapiens collagen, type XXIII, alpha 1 (COL23A1), mRNA NM\_173466 Homo sapiens hypothetical protein DKFZp434P055 (DKFZp434P055), mRNa NM 173467 Homo sapiens malonyl-CoA:acyl carrier protein transacylase (malonyltransfe NM 173468 Homo sapiens MOB1, Mps One Binder kinase activator-like 1A (yeast) (MOB NM 173469 Homo sapiens hypothetical protein LOC92912 (LOC92912), mRNA NM 173470 Homo sapiens transmembrane protein 32 (TMEM32), mRNA NM 173471 Homo saplens solute carrier family 25, member 26 (SLC25A26), mRNA NM 173472 Homo saplens hypothetical protein MGC40179 (MGC40179), mRNA NM 173473 Homo sapiens chromosome 10 open reading frame 104 (C10orf104), mRNA NM 173474 Homo sapiens N-terminal asparagine amidase (NTAN1), mRNA NM 173475 Homo sapiens hypothetical protein MGC48972 (MGC48972), mRNA NM 173476 Homo saplens hypothetical protein FLJ34512 (FLJ34512), mRNA NM\_173477 Homo sapiens Usher syndrome 1G (autosomal recessive) (USH1G), mRNA NM\_173478 Homo sapiens hypothetical protein FLJ40137 (FLJ40137), mRNA NM\_173479 Homo sapiens hypothetical protein LOC126248 (LOC126248), mRNA NM\_173480 Homo saplens hypothetical protein LOC126295 (LOC126295), mRNA NM 173481 Homo sapiens chromosome 19 open reading frame 21 (C19orf21), mRNA NM 173482 Homo sapiens hypothetical protein FLJ40365 (FLJ40365), mRNA NM 173483 Homo sapiens hypothetical protein FLJ39501 (FLJ39501), mRNA NM 173484 Homo saplens hypothetical protein FLJ40160 (FLJ40160), mRNA NM 173485 Homo sapiens chromosome 20 open reading frame 17 (C20orf17), mRNA NM 173486 Homo sapiens hypothetical protein FLJ40298 (FLJ40298), mRNA NM 173487 Homo sapiens hypothetical protein LOC132321 (LOC132321), mRNA NM\_173488 Homo sapiens solute camer organic anion transporter family, member 6A1 (! NM 173489 Homo sapiens hypothetical protein FLJ40243 (FLJ40243), mRNA NM 173490 Homo sapiens hypothetical protein LOC134285 (LOC134285), mRNA NM\_173491 Homo sapiens LSM11, U7 small nuclear RNA associated (LSM11), mRNA NM\_173492 Homo sapiens phosphatidylinositol-4-phosphate 5-kinase-like 1 (PIP5KL1), r NM\_173493 Homo saplens PAS domain containing protein 1 (PASD1), mRNA NM 173494 Homo sapiens hypothetical protein MGC35261 (MGC35261), mRNA NM 173495 Homo sapiens hypothetical protein FLJ30296 (FLJ30296), mRNA NM 173496 Homo sapiens membrane protein, palmitoylated 7 (MAGUK p55 subfamily m NM 173497 Homo saplens HECT domain containing 2 (HECTD2), transcript variant 2, ml NM 173499 Homo sapiens spermatogenesis-related protein 8 (MGC44294), mRNA NM 173500 Homo sapiens tau tubulin kinase 2 (TTBK2), mRNA NM\_173501 Homo sapiens hypothetical protein LOC146174 (LOC146174), mRNA NM\_173502 Homo sapiens hypothetical protein FLJ90661 (FLJ90661), mRNA NM\_173503 Homo sapiens hypothetical protein FLJ25818 (FLJ25818), mRNA NM\_173505 Homo sapiens ankyrin repeat domain 29 (ANKRD29), mRNA NM\_173506 Homo sapiens hypothetical protein MGC42718 (MGC42718), mRNA NM\_173507 Homo sapiens hypothetical protein FLJ37118 (FLJ37118), mRNA NM 173508 Homo saplens solute carrier family 35, member F3 (SLC35F3), mRNA NM 173509 Homo sapiens hypothetical protein MGC16664 (MGC16664), mRNA NM 173510 Homo sapiens hypothetical protein FLJ33814 (FLJ33814), mRNA

NM 173511 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region,

NM 173512 Homo sapiens hypothetical protein FLJ39822 (FLJ39822), mRNA NM 173513 Homo sapiens hypothetical protein MGC43122 (MGC43122), mRNA NM 173514 Homo sapiens hypothetical protein FLJ90709 (FLJ90709), mRNA NM 173515 Homo sapiens membrane associated guanylate kinase interacting protein-lik NM 173516 Homo sapiens poly(A)-specific ribonuclease (PARN)-like domain containing NM 173517 Homo sapiens vitamin K epoxide reductase complex, subunit 1-like 1 (VKOR NM 173518 Homo sapiens hypothetical protein FLJ25692 (FLJ25692), mRNA NM\_173519 Homo sapiens hypothetical protein MGC34646 (MGC34646), mRNA NM\_173521 Homo sapiens chromosome 9 open reading frame 84 (C9orf84), mRNA NM\_173522 Homo sapiens hypothetical protein FLJ36576 (FLJ36576), mRNA NM 173523 Homo sapiens melanoma antigen, family B, 6 (MAGEB6), mRNA NM 173524 Homo sapiens chromosome 10 open reading frame 64 (C10orf64), mRNA NM 173525 Homo sapiens hypothetical protein MGC34805 (MGC34805), mRNA NM 173526 Homo sapiens chromosome 14 open reading frame 54 (C14orf54), mRNA NM 173527 Homo sapiens hypothetical protein FLJ38964 (FLJ38964), mRNA NM 173528 Homo sapiens chromosome 15 open reading frame 26 (C15orf26), mRNA NM 173529 Homo sapiens hypothetical protein MGC33382 (MGC33382), mRNA NM\_173530 Homo sapiens zinc finger protein 610 (ZNF610), mRNA NM\_173531 Homo sapiens zinc finger protein 100 (ZNF100), mRNA NM\_173532 Homo sapiens hypothetical protein FLJ35838 (FLJ35838), mRNA NM 173533 Homo sapiens tudor domain containing 5 (TDRD5), mRNA NM 173535 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 173536 Homo sapiens gamma-aminobutyric acid (GABA) A receptor, gamma 1 (GAE NM 173537 Homo sapiens GTF2I repeat domain containing 2 (GTF2IRD2), mRNA NM\_173538 Homo sapiens hypothetical protein FLJ35802 (FLJ35802), mRNA NM 173539 Homo sapiens zinc finger protein 596 (ZNF596), mRNA NM 173540 Homo sapiens fucosyltransferase 11 (alpha (1,3) fucosyltransferase) (FUT11 NM 173541 Homo sapiens chromosome 10 open reading frame 91 (C10orf91), mRNA NM 173542 Homo saplens hypothetical protein LOC196463 (LOC196463), mRNA NM 173543 Homo sapiens hypothetical protein FLJ32844 (FLJ32844), mRNA NM 173544 Homo sapiens B-cell novel protein 1 (BCNP1), mRNA NM\_173545 Homo sapiens chromosome 2 open reading frame 13 (C2orf13), mRNA NM 173546 Homo saplens hypothetical protein MGC35097 (MGC35097), mRNA NM 173547 Homo sapiens hypothetical protein LOC201292 (LOC201292), mRNA NM 173548 Homo sapiens zinc finger protein 584 (ZNF584), mRNA NM 173549 Homo sapiens hypothetical protein FLJ39553 (FLJ39553), mRNA NM\_173550 Homo sapiens chromosome 9 open reading frame 93 (C9orf93), mRNA NM 173551 Homo sapiens sterile alpha motif domain containing 6 (SAMD6), mRNA NM 173552 Homo sapiens hypothetical protein MGC33365 (MGC33365), mRNA NM\_173553 Homo sapiens hypothetical protein FLJ25801 (FLJ25801), mRNA NM 173554 Homo sapiens chromosome 10 open reading frame 107 (C10orf107), mRNA NM\_173555 Homo sapiens trypsin domain containing 1 (TYSND1), mRNA NM 173556 Homo sapiens hypothetical protein MGC34732 (MGC34732), mRNA NM 173557 Homo sapiens ring finger protein 152 (RNF152), mRNA NM 173558 Homo sapiens FGD1 family, member 2 (FGD2), mRNA NM 173559 Homo sapiens hypothetical protein FLJ25791 (FLJ25791), mRNA NM 173560 Homo sapiens regulatory factor X domain containing 1 (RFXDC1), mRNA NM 173561 Homo sapiens unc-5 homolog C (C. elegans)-like (UNC5CL), mRNA NM 173562 Homo sapiens chromosome 6 open reading frame 69 (C6orf69), mRNA NM 173563 Homo sapiens chromosome 6 open reading frame 146 (C6orf146), mRNA NM 173564 Homo sapiens hypothetical protein FLJ37538 (FLJ37538), mRNA NM 173565 Homo sapiens hypothetical protein LOC222967 (LOC222967), mRNA NM\_173566 Homo sapiens hypothetical protein MGC50372 (MGC50372), mRNA NM 173567 Homo sapiens abhydrolase domain containing 7 (ABHD7), mRNA NM 173568 Homo sapiens uromodulin-like 1 (UMODL1), mRNA

NM\_173570 Homo sapiens zinc finger, DHHC domain containing 23 (ZDHHC23), mRNA NM\_173571 Homo sapiens hypothetical protein LOC255313 (LOC255313), mRNA

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NM 173642 Homo sapiens hypothetical protein MGC47816 (MGC47816), mRNA

NM 173643 Homo sapiens hypothetical protein DKFZp547G0215 (DKFZp547G0215), mf NM 173644 Homo sapiens hypothetical protein FLJ33860 (FLJ33860), mRNA NM 173645 Homo sapiens hypothetical protein FLJ37357 (FLJ37357), mRNA NM 173646 Homo sapiens hypothetical protein FLJ39660 (FLJ39660), mRNA NM 173647 Homo sapiens ring finger protein 149 (RNF149), mRNA NM 173648 Homo sapiens hypothetical protein FLJ39502 (FLJ39502), mRNA NM 173649 Homo sapiens hypothetical protein FLJ40172 (FLJ40172), mRNA NM\_173650 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 5 gamma (DNA NM\_173651 Homo sapiens fibrous sheath interacting protein 2 (FSIP2), mRNA NM\_173652 Homo sapiens hypothetical protein MGC34824 (MGC34824), mRNA NM\_173653 Homo sapiens solute carrier family 9 (sodium/hydrogen exchanger), isoform NM\_173654 Homo sapiens hypothetical protein MGC34132 (MGC34132), mRNA NM 173656 Homo sapiens zinc finger protein 619 (ZNF619), mRNA NM 173657 Homo sapiens hypothetical protein FLJ31139 (FLJ31139), mRNA NM 173658 Homo sapiens hypothetical protein FLJ36870 (FLJ36870), mRNA NM 173659 Homo sapiens hypothetical protein MGC29784 (MGC29784), mRNA NM 173660 Homo sapiens hypothetical protein FLJ33718 (FLJ33718), mRNA NM 173661 Homo sapiens hypothetical protein FLJ35424 (FLJ35424), mRNA NM\_173662 Homo sapiens hypothetical protein LOC285533 (LOC285533), mRNA NM\_173663 Homo saplens NY-REN-7 antigen (NY-REN-7), mRNA NM\_173664 Homo sapiens ADP-ribosylation factor-like 10A (ARL10A), mRNA NM\_173665 Homo sapiens hypothetical protein MGC34713 (MGC34713), mRNA NM 173666 Homo sapiens hypothetical protein FLJ33977 (FLJ33977), mRNA NM 173667 Homo sapiens hypothetical protein FLJ37543 (FLJ37543), mRNA NM 173669 Homo sapiens hypothetical protein FLJ34047 (FLJ34047), mRNA NM\_173670 Homo sapiens RGM domain family, member B (RGMB), mRNA NM 173671 Homo sapiens hypothetical protein FLJ37396 (FLJ37396), mRNA NM\_173672 Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 6 (PPIL6), mRNA NM 173673 Homo saplens hypothetical protein FLJ34503 (FLJ34503), mRNA NM\_173674 Homo sapiens discoidin, CUB and LCCL domain containing 1 (DCBLD1), mF NM 173675 Homo sapiens hypothetical protein FLJ33708 (FLJ33708), mRNA NM 173676 Homo sapiens patatin-like phospholipase domain containing 1 (PNPLA1), ml NM 173677 Homo saplens hypothetical protein FLJ40852 (FLJ40852), mRNA NM\_173678 Homo sapiens hypothetical protein FLJ40722 (FLJ40722), mRNA NM 173680 Homo saplens hypothetical protein MGC33584 (MGC33584), mRNA NM 173682 Homo sapiens hypothetical protein FLJ40288 (FLJ40288), mRNA NM 173683 Homo saplens chromosome 8 open reading frame 21 (C8orf21), mRNA NM 173685 Homo sapiens hypothetical protein FLJ32440 (FLJ32440), mRNA NM\_173687 Homo sapiens hypothetical protein FLJ37131 (FLJ37131), mRNA NM\_173688 Homo saplens hypothetical protein FLJ39630 (FLJ39630), mRNA NM 173689 Homo saplens crumbs homolog 2 (Drosophila) (CRB2), mRNA NM\_173690 Homo sapiens chromosome 9 open reading frame 126 (C9orf126), mRNA NM 173691 Homo sapiens chromosome 9 open reading frame 75 (C9orf75), mRNA NM 173694 Homo sapiens ATPase, Class VI, type 11C (ATP11C), mRNA NM 173695 Homo sapiens hypothetical protein FLJ36601 (FLJ36601), mRNA NM 173698 Homo sapiens hypothetical protein FLJ37659 (FLJ37659), mRNA NM\_173699 Homo sapiens hypothetical protein MGC33889 (MGC33889), mRNA NM\_173700 Homo sapiens BCL6 co-repressor-like 2 (BCORL2), mRNA NM 173701 Homo sapiens tryptophanyl-tRNA synthetase (WARS), transcript variant 2, rr NM 173728 Homo sapiens Rho quanine nucleotide exchange factor (GEF) 15 (ARHGEF NM\_173791 Homo sapiens PDZ domain containing 8 (PDZK8), mRNA NM 173793 Homo sapiens hypothetical protein LOC128977 (LOC128977), mRNA NM 173794 Homo sapiens FUN14 domain containing 1 (FUNDC1), mRNA NM\_173795 Homo sapiens hypothetical protein FLJ32096 (FLJ32096), mRNA NM 173797 Homo sapiens PAP associated domain containing 4 (PAPD4), mRNA NM 173798 Homo sapiens zinc finger, CCHC domain containing 12 (ZCCHC12), mRNA

NM 173799 Homo sapiens hypothetical protein FLJ39873 (FLJ39873), mRNA

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NM 173800 Homo sapiens laeverin (FLJ90650), mRNA NM 173801 Homo sapiens hypothetical protein FLJ36198 (FLJ36198), mRNA NM 173802 Homo sapiens hypothetical protein MGC50559 (MGC50559), mRNA NM 173803 Homo sapiens hypothetical protein FLJ39599 (FLJ39599), mRNA NM 173804 Homo sapiens hypothetical protein MGC30208 (MGC30208), mRNA NM 173805 Homo sapiens hypothetical protein FLJ38723 (FLJ38723), mRNA NM 173806 Homo sapiens hypothetical protein MGC50721 (MGC50721), mRNA NM 173807 Homo sapiens hypothetical protein MGC33370 (MGC33370), mRNA NM 173808 Homo sapiens neuronal growth regulator 1 (NEGR1), mRNA NM 173809 Homo sapiens biogenesis of lysosome-related organelles complex-1, subuni NM\_173810 Homo sapiens hypothetical protein MGC29649 (MGC29649), mRNA NM\_173811 Homo sapiens hypothetical protein FLJ32675 (FLJ32675), mRNA NM 173812 Homo sapiens hypothetical protein FLJ32949 (FLJ32949), mRNA NM\_173813 Homo sapiens hypothetical protein FLJ34154 (FLJ34154), mRNA NM\_173815 Homo sapiens hypothetical protein FLJ37464 (FLJ37464), mRNA NM 173821 Homo sapiens hypothetical protein FLJ33590 (FLJ33590), mRNA NM 173822 Homo saplens hypothetical protein MGC39518 (MGC39518), mRNA NM 173824 Homo sapiens hypothetical protein MGC26717 (MGC26717), mRNA NM 173825 Homo sapiens RAB, member of RAS oncogene family-like 3 (RABL3), mRN/ NM 173826 Homo sapiens hypothetical protein DKFZp313N0621 (DKFZp313N0621), mF NM 173827 Homo sapiens hypothetical protein FLJ38991 (FLJ38991), mRNA NM 173828 Homo sapiens chromosome 5 open reading frame 16 (C5orf16), mRNA NM\_173829 Homo sapiens hypothetical protein FLJ36754 (FLJ36754), mRNA NM\_173830 Homo saplens chromosome 6 open reading frame 182 (C6orf182), mRNA NM 173831 Homo sapiens hypothetical protein LOC286075 (LOC286075), mRNA NM\_173832 Homo sapiens hypothetical protein FLJ38705 (FLJ38705), mRNA NM\_173833 Homo sapiens hypothetical protein MGC45780 (MGC45780), mRNA NM\_173834 Homo sapiens hypothetical protein MGC21416 (MGC21416). mRNA NM 173841 Homo sapiens interleukin 1 receptor antagonist (IL1RN), transcript variant 2, NM 173842 Homo sapiens interleukin 1 receptor antagonist (IL1RN), transcript variant 1, NM 173843 Homo sapiens interleukin 1 receptor antagonist (IL1RN), transcript variant 4, NM 173844 Homo sapiens mucosa associated lymphoid tissue lymphoma translocation of NM 173846 Homo sapiens chromosome 14 open reading frame 8 (C14orf8), mRNA NM\_173847 Homo sapiens sperm acrosome associated 3 (SPACA3), mRNA NM\_173848 Homo sapiens hypothetical protein LOC138046 (LOC138046), mRNA NM 173849 Homo sapiens goosecoid (GSC), mRNA NM 173850 Homo sapiens serine (or cystelne) proteinase inhibitor, clade A (alpha-1 antiq NM 173851 Homo sapiens solute carrier family 30 (zinc transporter), member 8 (SLC30A NM 173852 Homo saplens keratinocyte associated protein 2 (KRTCAP2), mRNA NM\_173853 Homo sapiens keratinocyte associated protein 3 (KRTCAP3), mRNA NM\_173854 Homo sapiens solute carrier family 41, member 1 (SLC41A1), mRNA NM 173855 Homo sapiens morn (LOC283385), mRNA NM 173856 Homo sapiens vomeronasal 1 receptor 2 (VN1R2), mRNA NM\_173857 Homo sapiens vomeronasal 1 receptor 4 (VN1R4), mRNA NM 173858 Homo saplens vomeronasal 1 receptor 5 (VN1R5), mRNA NM 173859 Homo sapiens breast cancer and salivary gland expression gene (BASE), ml NM 173860 Homo sapiens homeo box C12 (HOXC12), mRNA NM 173872 Homo sapiens chloride channel 3 (CLCN3), transcript variant e, mRNA NM\_174855 Homo sapiens isocitrate dehydrogenase 3 (NAD+) beta (IDH3B), nuclear ger NM 174856 Homo sapiens isocitrate dehydrogenase 3 (NAD+) beta (IDH3B), nuclear ger NM\_174858 Homo sapiens adenylate kinase 5 (AK5), transcript variant 1, mRNA NM 174869 Homo sapiens isocitrate dehydrogenase 3 (NAD+) gamma (IDH3G), nuclear NM 174871 Homo saniens proteasome (prosome, macropain) 26S subunit, non-ATPase,

NM\_174872 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 2 (P2RX2)
NM\_174873 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 2 (P2RX2)
NM\_174878 Homo sapiens Usher syndrome 3A (USH3A), transcript variant 1, mRNA
NM\_174880 Homo sapiens Usher syndrome 3A (USH3A), transcript variant 3, mRNA

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NM 174881 Homo sapiens crumbs homolog 3 (Drosophila) (CRB3), transcript variant 3, r NM 174882 Homo sapiens crumbs homolog 3 (Drosophila) (CRB3), transcript variant 1, r NM 174886 Homo sapiens TGFB-induced factor (TALE family homeobox) (TGIF), transcr NM 174887 Homo sapiens intraflagellar transport protein IFT20 (LOC90410), mRNA NM 174889 Homo sapiens hypothetical protein LOC91942 (LOC91942), mRNA NM 174890 Homo sapiens AN1, ubiquitin-like, homolog (Xenopus laevis) (ANUBL1), mR NM 174891 Homo sapiens chromosome 14 open reading frame 79 (C14orf79), mRNA NM\_174892 Homo sapiens triggering receptor expressed on myeloid cells 5 (TREM5), mf NM\_174896 Homo sapiens hypothetical protein MGC24133 (MGC24133), mRNA NM\_174897 Homo sapiens bactericidal/permeability-increasing protein-like 3 (BPIL3), mF NM\_174898 Homo sapiens hypothetical protein LOC129530 (LOC129530), mRNA NM 174899 Homo sapiens F-box protein 36 (FBXO36), mRNA NM 174900 Homo sapiens zinc finger protein 42 (ZFP42), mRNA NM 174901 Homo sapiens family with sequence similarity 9, member C (FAM9C), mRNA NM\_174902 Homo sapiens hypothetical protein LOC143458 (LOC143458), mRNA NM 174905 Homo sapiens hypothetical protein LOC147965 (LOC147965), mRNA NM 174906 Homo sapiens hypothetical protein MGC39724 (MGC39724), mRNA NM 174907 Homo sapiens protein phosphatase 4, regulatory subunit 2 (PPP4R2), mRN/ NM 174908 Homo saplens chromosome 3 open reading frame 6 (C3orf6), transcript varia NM\_174909 Homo sapiens hypothetical protein MGC23909 (MGC23909), mRNA NM\_174910 Homo sapiens t-complex-associated-testis-expressed 3 (TCTE3), mRNA NM 174911 Homo saniens breast cancer membrane protein 101 (NSE2), mRNA NM 174912 Homo sapiens hypothetical protein FLJ31204 (FLJ31204), mRNA NM 174913 Homo sapiens chromosome 14 open reading frame 21 (C14orf21), mRNA NM 174914 Homo sapiens hypothetical protein LOC167127 (LOC167127), mRNA NM\_174916 Homo sapiens ubiquitin protein ligase E3 component n-recognin 1 (UBR1), n NM\_174917 Homo sapiens hypothetical protein LOC197322 (LOC197322), mRNA NM 174918 Homo sapiens hypothetical protein LOC199675 (LOC199675), mRNA NM 174920 Homo saplens hypothetical protein LOC201191 (LOC201191), mRNA NM\_174921 Homo sapiens hypothetical protein LOC201895 (LOC201895), mRNA NM 174922 Homo sapiens aarF domain containing kinase 5 (ADCK5), mRNA NM 174923 Homo sapiens hypothetical protein MGC31967 (MGC31967), mRNA NM 174924 Homo sapiens hypothetical protein LOC204474 (LOC204474), mRNA NM\_174925 Homo sapiens hypothetical protein LOC205251 (LOC205251), mRNA NM 174926 Homo sapiens hypothetical protein MGC17839 (MGC17839), mRNA NM 174927 Homo sapiens spergen-1 (SPAS1), mRNA NM 174928 Homo sapiens hypothetical protein LOC221143 (LOC221143), mRNA NM 174930 Homo sapiens postmeiotic segregation increased 2-like 5 (PMS2L5), mRNA NM 174931 Homo sapiens hypothetical protein FLJ38348 (FLJ38348), mRNA NM\_174932 Homo sapiens bactericidal/permeability-increasing protein-like 2 (BPIL2), mF NM 174933 Homo sapiens phytanoyl-CoA dloxygenase domain containing 1 (PHYHD1), NM 174934 Homo sapiens sodium channel, voltage-gated, type IV, beta (SCN4B), mRN/ NM\_174936 Homo sapiens proprotein convertase subtilisin/kexin type 9 (PCSK9), mRNA NM 174937 Homo sapiens transcription elongation regulator 1-like (TCERG1L), mRNA NM 174938 Homo sapiens FERM domain containing 3 (FRMD3), mRNA NM 174939 Homo sapiens hypothetical protein MGC39681 (MGC39681), mRNA NM 174940 Homo sapiens hypothetical protein LOC283232 (LOC283232), mRNA NM\_174941 Homo sapiens scavenger receptor cysteine-rich type 1 protein M160 (M160), NM\_174942 Homo sapiens growth arrest-specific 2 like 3 (GAS2L3), mRNA NM\_174943 Homo sapiens hypothetical protein FLJ25976 (FLJ25976), mRNA NM 174944 Homo sapiens chromosome 14 open reading frame 20 (C14orf20), mRNA NM 174945 Homo sapiens zinc finger protein 575 (ZNF575), mRNA NM 174947 Homo sapiens chromosome 19 open reading frame 30 (C19orf30), mRNA NM 174950 Homo sapiens hypothetical protein FLJ30435 (FLJ30435), mRNA NM 174951 Homo sapiens family with sequence similarity 9, member A (FAM9A), mRNA NM 174952 Homo sapiens hypothetical protein MGC46496 (MGC46496), mRNA NM 174953 Homo sapiens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v

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NM_174954 Homo saptens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v
 NM_174955 Homo sapiens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v
 NM_174956 Homo sapiens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v
 NM_174957 Homo sapiens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v
 NM_174958 Homo saptens ATPase, Ca++ transporting, ubiquitous (ATP2A3), transcript v
 NM 174959 Homo sapiens hypothetical protein LOC136306 (LOC136306), mRNA
 NM_174961 Homo sapiens synovial sarcoma, X breakpoint 8 (SSX8), mRNA
 NM_174962 Homo sapiens synovial sarcoma, X breakpoint 9 (SSX9), mRNA
 NM 174963 Homo sapiens sialytransferase 6 (N-acetyllacosaminide alpha 2,3-sialytrans
 NM 174964 Homo sapiens sialyltransferase 6 (N-acetyllacosaminide alpha 2,3-sialyltrans
 NM 174965 Homo sapiens sialyltransferase 6 (N-acetyllacosaminide alpha 2,3-sialyltrans
 NM_174966 Homo sapiens sialyttransferase 6 (N-acetyllacosaminide alpha 2,3-sialyttrans
 NM_174967 Homo sapiens sialyltransferase 6 (N-acetyllacosaminide alpha 2,3-sialyltrans
 NM_174968 Homo sapiens sialyttransferase 6 (N-acetyllacosaminide alpha 2,3-sialyttrans
 NM_174969 Homo sapiens sialyttransferase 6 (N-acetyllacosaminide alpha 2,3-sialyttrans
 NM_174970 Homo sapiens sialyttransferase 6 (N-acetyllacosaminide alpha 2,3-sialyttrans
 NM_174971 Homo sapiens sialyltransferase 6 (N-acetyllacosaminide alpha 2,3-sialyltrans
 NM 174972 Homo saplens sialyltransferase 6 (N-acetyllacosaminide alpha 2,3-sialyltrans
 NM_174975 Homo sapiens SEC14-like 3 (S. cerevisiae) (SEC14L3), mRNA
NM_174976 Homo sapiens zinc finger, DHHC domain containing 22 (ZDHHC22), mRNA
NM 174977 Homo sapiens SEC14-like 4 (S. cerevislae) (SEC14L4), mRNA
NM 174978 Homo sapiens chromosome 14 open reading frame 39 (C14orf39), mRNA
NM_174980 Homo sapiens vomeronasal 1 receptor 3 (VN1R3), mRNA
NM 174981 Homo sapiens ankyrin repeat domain 21 (ANKRD21), mRNA
NM_174983 Homo sapiens chromosome 19 open reading frame 28 (C19orf28), mRNA
NM_175038 Homo sapiens contactin 1 (CNTN1), transcript variant 2, mRNA
NM_175039 Homo sapiens sialytransferase 7D ((alpha-N-acetylneuraminyl-2,3-beta-gala
NM_175040 Homo sapiens sialyltransferase 7D ((alpha-N-acetylneuraminyl-2,3-beta-gala
NM_175047 Homo sapiens paired immunoglobin-like type 2 receptor beta (PILRB), transc
NM_175052 Homo sapiens slalyttransferase 8D (alpha-2, 8-polysialyttransferase) (SIAT8I
NM 175053 Homo sapiens keratin 6 irs4 (K6IRS4), mRNA
NM_175054 Homo sapiens histone 4, H4 (HIST4H4), mRNA
NM_175055 Homo sapiens histone 3, H2bb (HIST3H2BB), mRNA
NM_175056 Homo sapiens hypothetical protein LOC131368 (LOC131368), mRNA
NM 175057 Homo sapiens trace amine receptor 3 (TRAR3), mRNA
NM_175058 Homo sapiens hypothetical protein LOC144100 (LOC144100), mRNA
NM_175060 Homo sapiens chromosome 14 open reading frame 27 (C14orf27), mRNA
NM_175061 Homo saplens juxtaposed with another zinc finger gene 1 (JAZF1), mRNA
NM_175062 Homo sapiens RasGEF domain family, member 1C (RASGEF1C), mRNA
NM_175063 Homo sapiens hypothetical protein LOC284361 (LOC284361), transcript van
NM_175064 Homo sapiens Williams Beuren syndrome chromosome region 19 (WBSCR1
NM 175065 Homo sapiens histone 2, H2ab (HIST2H2AB), mRNA
NM_175066 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 51 (DDX51), mRNA
NM 175067 Homo sapiens trace amine receptor 4 (TRAR4), mRNA
NM 175068 Homo sapiens keratin 6 irs3 (K6IRS3), mRNA
NM_175069 Homo sapiens aprataxin (APTX), transcript variant 2, mRNA
NM_175071 Homo sapiens aprataxin (APTX), transcript variant 5, mRNA
NM_175072 Homo sapiens aprataxin (APTX), transcript variant 3, mRNA
NM_175073 Homo sapiens aprataxin (APTX), transcript variant 1, mRNA
NM_175075 Homo sapiens hypothetical protein INM01 (INM01), mRNA
NM_175077 Homo sapiens Src-like-adaptor 2 (SLA2), transcript variant 2, mRNA
NM_175078 Homo sapiens keratin 1B (KRT1B), mRNA
NM_175080 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 5 (P2RX5)
NM_175081 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 5 (P2RX5)
NM_175085 Homo sapiens phosphoribosylglycinamide formyttransferase, phosphoribosyl
NM_175566 Homo sapiens contactin 5 (CNTN5), transcript variant 2, mRNA
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NM\_175567 Homo sapiens punnergic receptor P2X, ligand-gated ion channel, 4 (P2RX4)

NM 175568 Homo sapiens purinergic receptor P2X, ligand-gated ion channel, 4 (P2RX4) NM 175569 Homo sapiens Xg blood group (pseudoautosomal boundary-divided on the X NM 175571 Homo sapiens human immune associated nucleotide 6 (hIAN6), mRNA NM 175573 Homo sapiens adhesion regulating molecule 1 (ADRM1), transcript variant 2, NM 175575 Homo saniens WFIKKN-related protein (WFIKKNRP), mRNA NM 175605 Homo sapiens tetratricopeptide repeat domain 10 (TTC10), transcript variant NM 175607 Homo sapiens contactin 4 (CNTN4), transcript variant 1, mRNA NM\_175609 Homo sapiens ADP-ribosylation factor GTPase activating protein 1 (ARFGAF NM\_175610 Homo sapiens tight junction protein 1 (zona occludens 1) (TJP1), transcript v NM\_175611 Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1), transcript v NM 175612 Homo sapiens contactin 4 (CNTN4), transcript variant 2, mRNA NM 175613 Homo sapiens contactin 4 (CNTN4), transcript variant 3. mRNA NM 175614 Homo sapiens NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 11, NM 175616 Homo sapiens FIS (FIS), mRNA NM 175617 Homo sapiens metallothionein 1E (functional) (MT1E), mRNA NM 175619 Homo saplens zygote arrest 1 (ZAR1), mRNA NM\_175622 Homo sapiens metallothionein 1J (MT1J), mRNA NM\_175623 Homo sapiens RAB3A interacting protein (rabin3) (RAB3IP), transcript variar NM 175624 Homo saplens RAB3A interacting protein (rabin3) (RAB3IP), transcript variar NM\_175625 Homo saplens RAB3A interacting protein (rabin3) (RAB3IP), transcript variar NM\_175626 Homo saplens RAB3A Interacting protein (rabin3) (RAB3IP), transcript variar NM\_175627 Homo sapiens RAB3A interacting protein (rabin3) (RAB3IP), transcript variar NM 175629 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 alpha (DNMT3A), trans NM\_175630 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 alpha (DNMT3A), trans NM 175634 Homo saplens core-binding factor, runt domain, alpha subunit 2; translocated NM 175635 Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated NM 175636 Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated NM 175698 Homo sapiens synovial sarcoma, X breakpoint 2 (SSX2), transcript variant 2, NM 175709 Homo sapiens chromobox homolog 7 (CBX7), mRNA NM\_175711 Homo sapiens synovial sarcoma, X breakpoint 3 (SSX3), transcript variant 2, NM 175719 Homo sapiens thyroid peroxidase (TPO), transcript variant 2, mRNA NM 175720 Homo sapiens thyroid peroxidase (TPO), transcript variant 3, mRNA NM 175721 Homo sapiens thyroid peroxidase (TPO), transcript variant 4, mRNA NM\_175722 Homo sapiens thyroid peroxidase (TPO), transcript variant 5, mRNA NM\_175723 Homo sapiens synovial sarcoma, X breakpoint 5 (SSX5), transcript variant 2, NM 175724 Homo sapiens interleukin 5 receptor, alpha (IL5RA), transcript variant 2, mRI NM 175725 Homo sapiens interleukin 5 receptor, alpha (IL5RA), transcript variant 3, mRI NM\_175726 Homo sapiens interleukin 5 receptor, alpha (IL5RA), transcript variant 4, mRI NM\_175727 Homo sapiens Interleukin 5 receptor, alpha (IL5RA), transcript variant 5, mRI NM 175728 Homo saplens interleukin 5 receptor, alpha (IL5RA), transcript variant 6, mRI NM 175729 Homo saplens synovial sarcoma, X breakpoint 4 (SSX4), transcript variant 2, NM 175733 Homo sapiens synaptotagmin IX (SYT9), mRNA NM\_175734 Homo sapiens hypothetical protein LOC201243 (LOC201243), mRNA NM 175735 Homo saplens lysozyme-like (LYG2), mRNA NM\_175736 Homo sapiens formin-like 3 (FMNL3), transcript variant 1, mRNA NM 175737 Homo sapiens klotho beta like (LOC152831), mRNA NM\_175738 Homo sapiens RAB37, member RAS oncogene family (RAB37), mRNA NM 175739 Homo sapiens serine (or cysteine) proteinase inhibitor, clade A (alpha-1 anti-NM 175741 Homo sapiens nuclear protein in testis (NUT), mRNA NM 175742 Homo sapiens melanoma antigen, family A, 2 (MAGEA2), transcript variant 2 NM\_175743 Homo sapiens melanoma antigen, family A, 2 (MAGEA2), transcript variant 3 NM 175744 Homo sapiens ras homolog gene family, member C (RHOC), mRNA NM 175745 Homo sapiens cancer/testis antigen 3 (CTAG3), transcript variant 1, mRNA NM 175747 Homo sapiens oligodendrocyte transcription factor 3 (OLIG3), mRNA

NM\_175748 Homo sapiens chromosome 14 open reading frame 130 (C14off130), mRNA NM\_175767 Homo sapiens interleukin 6 signal fransducer (gp130, oncostatin M receptor) NM 175768 Homo sapiens glutamate receptor, inordropic, kainate 2 (GRIK2), transcript v

NM 175834 Homo sapiens keratin 6L (KRT6L), mRNA NM 175839 Homo sapiens spermine oxidase (SMOX), transcript variant 1, mRNA NM 175840 Homo sapiens spermine oxidase (SMOX), transcript variant 2, mRNA NM 175841 Homo sapiens spermine oxidase (SMOX), transcript variant 3, mRNA NM 175842 Homo sapiens spermine oxidase (SMOX), transcript variant 4, mRNA NM\_175847 Homo sapiens polypyrimidine tract binding protein 1 (PTBP1), transcript varia NM 175848 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 beta (DNMT3B), transi NM\_175849 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 beta (DNMT3B), transc NM\_175850 Homo sapiens DNA (cytosine-5-)-methyltransferase 3 beta (DNMT3B), transi NM 175851 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 175852 Homo sapiens taxilin (DKFZp451J0118), mRNA NM 175854 Homo sapiens PABP1-dependent poly A-specific ribonuclease subunit PAN3 NM\_175857 Homo sapiens keratin associated protein 8-1 (KRTAP8-1), mRNA NM 175858 Homo sapiens keratin associated protein 11-1 (KRTAP11-1), mRNA NM\_175859 Homo sapiens CTP synthase II (CTPS2), transcript variant 2, mRNA NM 175861 Homo sapiens ARG99 protein (ARG99), mRNA NM 175862 Homo sapiens CD86 antigen (CD28 antigen ligand 2, B7-2 antigen) (CD86), NM 175863 Homo sapiens AT rich interactive domain 1B (SWI1-like) (ARID1B), transcrip NM 175864 Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated NM 175865 Homo sapiens ELYS transcription factor-like protein TMBS62 (ELYS), mRNA NM 175866 Homo sapiens kinase interacting with leukemia-associated gene (stathmin) ( NM 175867 Homo sapiens DNA (cytosine-5-)-methyltransferase 3-like (DNMT3L), transci NM\_175868 Homo sapiens melanoma antigen, family A, 6 (MAGEA6), transcript variant 2 NM\_175870 Homo saplens hypothetical protein LOC90925 (LOC90925), mRNA NM\_175871 Homo sapiens hypothetical protein FLJ35119 (FLJ35119), mRNA NM\_175872 Homo sapiens FLJ38451 protein (FLJ38451), mRNA NM\_175873 Homo sapiens hypothetical protein LOC134548 (LOC134548), mRNA NM\_175874 Homo saplens hypothetical protein MGC47869 (MGC47869), mRNA NM 175875 Homo sapiens sine oculis homeobox homolog 5 (Drosophila) (SIX5), mRNA NM 175876 Homo sapiens exocyst complex component 8 (EXOC8), mRNA NM 175877 Homo sapiens hypothetical protein MGC35023 (MGC35023), mRNA NM 175878 Homo saniens hypothetical protein MGC57211 (MGC57211), mRNA NM 175881 Homo saplens hypothetical protein MGC48986 (MGC48986), mRNA NM\_175882 Homo sapiens intramembrane protease 5 (IMP5), mRNA NM\_175884 Homo saplens hypothetical protein FLJ36031 (FLJ36031), mRNA NM\_175885 Homo sapiens hypothetical protein MGC33846 (MGC33846), mRNA NM\_175886 Homo sapiens phosphoribosyl pyrophosphate synthetase 1-like 1 (PRPS1L1 NM 175887 Homo sapiens hypothetical protein LOC222171 (LOC222171), mRNA NM\_175892 Homo sapiens hypothetical protein FLJ37266 (FLJ37266), mRNA NM\_175895 Homo sapiens hypothetical protein FLJ25590 (FLJ25590), mRNA NM 175898 Homo sapiens hypothetical protein LOC283687 (LOC283687), mRNA NM 175900 Homo sapiens hypothetical protein FLJ35681 (FLJ35681), mRNA NM 175901 Homo sapiens hypothetical protein LOC283932 (LOC283932), mRNA NM 175902 Homo sapiens hypothetical protein FLJ22222 (FLJ22222), mRNA NM 175903 Homo saplens hypothetical protein LOC284033 (LOC284033), mRNA NM\_175904 Homo sapiens hypothetical protein FLJ40121 (FLJ40121), mRNA NM\_175906 Homo sapiens hypothetical protein MGC33608 (MGC33608), mRNA NM\_175907 Homo sapiens zinc binding alcohol dehydrogenase, domain containing 2 (ZA NM\_175908 Homo sapiens hypothetical protein LOC284296 (LOC284296), mRNA NM\_175910 Homo sapiens zinc finger protein 493 (ZNF493), mRNA NM\_175911 Homo sapiens hypothetical protein MGC40047 (MGC40047), mRNA NM\_175913 Homo sapiens junctophilin 2 (JPH2), transcript variant 2, mRNA NM\_175918 Homo sapiens hypothetical protein FLJ34443 (FLJ34443), mRNA NM 175920 Homo sapiens hypothetical protein FLJ39485 (FLJ39485). mRNA NM\_175921 Homo sapiens hypothetical protein LOC285636 (LOC285636), mRNA NM 175922 Homo sapiens hypothetical protein MGC35308 (MGC35308), mRNA

NM 175923 Homo sapiens hypothetical protein MGC42630 (MGC42630), mRNA

NM 175924 Homo sapiens immunoglobulin-like domain containing receptor 1 (ILDR1), m NM 175929 Homo sapiens fibroblast growth factor 14 (FGF14), transcript variant 2, mRN. NM 175931 Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated NM 175932 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, NM 175940 Homo sapiens dual oxidase 1 (DUOX1), transcript variant 2, mRNA NM 176071 Homo sapiens purinergic receptor P2Y, G-protein coupled, 2 (P2RY2), transt NM 176072 Homo sapiens purinergic receptor P2Y, G-protein coupled, 2 (P2RY2), transt NM 176081 Homo sapiens DNA (cytosine-5-)-methyltransferase 2 (DNMT2), transcript ve NM 176083 Homo sapiens DNA (cytosine-5-)-methyltransferase 2 (DNMT2), transcript va NM 176084 Homo sapiens DNA (cytosine-5-)-methyltransferase 2 (DNMT2), transcript va NM 176085 Homo sapiens DNA (cytosine-5-)-methyltransferase 2 (DNMT2), transcript va NM 176086 Homo sapiens DNA (cytosine-5-)-methyltransferase 2 (DNMT2), transcript va NM 176095 Homo sapiens CDK5 regulatory subunit associated protein 3 (CDK5RAP3), t NM 176096 Homo sapiens CDK5 regulatory subunit associated protein 3 (CDK5RAP3), t NM 176782 Homo sapiens hyporthetical protein MGC27169 (MGC27169), mRNA NM\_176783 Homo sapiens proteasome (prosome, macropain) activator subunit 1 (PA28: NM 176786 Homo sapiens interleukin 9 receptor (IL9R), transcript variant 2, mRNA NM\_176787 Homo sapiens phosphatidylinositol glycan, class N (PIGN), transcript variant NM 176789 Homo sapiens myotubularin related protein 1 (MTMR1), transcript variant 2, I NM 176791 Homo sapiens chromosome 20 open reading frame 65 (C20orf65), mRNA NM 176792 Homo sapiens mitochondrial ribosomal protein L43 (MRPL43), nuclear gene NM\_176793 Homo sapiens mitochondnal ribosomal protein L43 (MRPL43), nuclear gene NM 176794 Homo sapiens mitochondrial ribosomal protein L43 (MRPL43), nuclear gene NM 176795 Homo sapiens v-Ha-ras Harvey rat sarcoma viral oncogene homolog (HRAS) NM 176796 Homo sapiens pyrimidinergic receptor P2Y, G-protein coupled, 6 (P2RY6), tr NM 176797 Homo sapiens pyrimidinergic receptor P2Y, G-protein coupled, 6 (P2RY6), tr NM\_176798 Homo sapiens pyrimidinergic receptor P2Y, G-protein coupled, 6 (P2RY6), tr NM\_176799 Homo saplens Integrin-linked kinase-associated serine/threonine phosphatas NM\_176800 Homo sapiens PRP4 pre-mRNA processing factor 4 homolog B (yeast) (PRF NM 176801 Homo sapiens adducin 1 (alpha) (ADD1), transcript variant 4, mRNA NM\_176805 Homo sapiens mitochondrial ribosomal protein S11 (MRPS11), nuclear gene NM\_176806 Homo sapiens molybdenum cofactor synthesis 2 (MOCS2), transcript variant NM 176810 Homo sapiens NACHT, leucine rich repeat and PYD containing 13 (NALP13) NM 176811 Homo sapiens NACHT, leucine rich repeat and PYD containing 8 (NALP8), n NM 176812 Homo sapiens chromosome 20 open reading frame 178 (C20orf178), mRNA NM 176813 Homo sapiens breast cancer membrane protein 11 (BCMP11), mRNA NM\_176814 Homo sapiens hypothetical protein LOC168850 (LOC168850), mRNA NM\_176815 Homo sapiens hypothetical protein LOC200895 (LOC200895), mRNA NM 176816 Homo sapiens Kenae (KENAE), mRNA NM\_176817 Homo sapiens taste receptor, type 2, member 38 (TAS2R38), mRNA NM\_176818 Homo sapiens hypothetical protein 15E1.2 (15E1.2), mRNA NM\_176820 Homo sapiens NACHT, leucine rich repeat and PYD containing 9 (NALP9), n NM\_176821 Homo sapiens NACHT, leucine nch repeat and PYD containing 10 (NALP10) NM 176822 Homo sapiens NACHT, leucine rich repeat and PYD containing 14 (NALP14) NM 176823 Homo sapiens S100 calcium binding protein A15 (S100A15), mRNA NM 176824 Homo sapiens Bardet-Biedl syndrome 7 (BBS7), transcript variant 1, mRNA NM 176825 Homo sapiens sulfotransferase family, cytosolic, 1C, member 1 (SULT1C1), NM 176826 Homo sapiens ilvB (bacterial acetolactate synthase)-like (ILVBL), transcript v NM\_176853 Homo sapiens C-terminal modulator protein (CTMP), transcript variant 2, mR NM 176863 Homo sapiens proteasome (prosome, macropain) activator subunit 3 (PA28 ! NM\_176866 Homo sapiens inorganic pyrophosphatase 2 (PPA2), transcript variant 3, mR NM\_176867 Homo sapiens inorganic pyrophosphatase 2 (PPA2), transcript variant 4, mR NM\_176869 Homo sapiens inorganic pyrophosphatase 2 (PPA2), transcript variant 1, mR NM\_176870 Homo sapiens metallothionein 1K (MT1K), mRNA NM 176871 Homo sapiens PDZ and LIM domain 2 (mystique) (PDLIM2), transcript variar NM 176874 Homo sapiens sulfotransferase family 4A, member 1 (SULT4A1), transcript v NM 176875 Homo sapiens cholecystokinin B receptor (CCKBR), mRNA

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NM 176876 Homo sapiens purinergic receptor P2Y, G-protein coupled, 12 (P2RY12), trail NM 176877 Homo sapiens InaD-like protein (INADL), transcript variant 2, mRNA NM 176878 Homo sapiens InaD-like protein (INADL), transcript variant 4, mRNA NM 176880 Homo sapiens TR4 orphan receptor associated protein TRA16 (TRA16), mR NM 176881 Homo sapiens taste receptor, type 2, member 39 (TAS2R39), mRNA NM 176882 Homo sapiens taste receptor, type 2, member 40 (TAS2R40), mRNA NM\_176883 Homo sapiens taste receptor, type 2, member 41 (TAS2R41), mRNA NM\_176884 Homo sapiens taste receptor, type 2, member 43 (TAS2R43), mRNA NM\_176885 Homo sapiens taste receptor, type 2, member 44 (TAS2R44), mRNA NM\_176886 Homo sapiens taste receptor, type 2, member 45 (TAS2R45), mRNA NM\_176887 Homo sapiens taste receptor, type 2, member 46 (TAS2R46), mRNA NM 176888 Homo sapiens taste receptor, type 2, member 48 (TAS2R48), mRNA NM 176889 Homo sapiens taste receptor, type 2, member 49 (TAS2R49), mRNA NM 176890 Homo sapiens taste receptor, type 2, member 50 (TAS2R50), mRNA NM 176891 Homo sapiens interferon epsilon 1 (IFNE1), mRNA NM 176894 Homo sapiens purinergic receptor P2Y, G-protein coupled, 13 (P2RY13), trail NM 176895 Homo sapiens phosphatidic acid phosphatase type 2A (PPAP2A), transcript NM 177398 Homo sapiens LIM homeobox transcription factor 1, alpha (LMX1A), transcription NM\_177399 Homo sapiens LIM homeobox transcription factor 1, alpha (LMX1A), transcription NM\_177400 Homo saplens NK6 transcription factor related, locus 2 (Drosophila) (NKX6-2 NM\_177402 Homo sapiens synaptotagmin II (SYT2), mRNA NM 177403 Homo sapiens RAB7B, member RAS oncogene family (RAB7B), mRNA NM 177404 Homo sapiens melanoma antigen, family B, 1 (MAGEB1), transcript variant 2 NM\_177405 Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), NM\_177414 Homo sapiens phosphatidic acid phosphatase type 2B (PPAP2B), transcript NM 177415 Homo sapiens melanoma antigen, family B, 1 (MAGEB1), transcript variant 3 NM 177417 Homo sapiens kinesin light chain 2-like (KLC2L), transcript variant 1, mRNA NM 177422 Homo sapiens eukaryotic translation initiation factor 2C, 3 (EIF2C3), transcrip NM 177423 Homo sapiens protein tyrosine phosphatase, receptor type, f polypeptide (PT NM 177424 Homo sapiens syntaxin 12 (STX12), mRNA NM 177427 Homo saplens purinergic receptor P2X, ligand-gated ion channel, 7 (P2RX7) NM 177433 Homo sapiens melanoma antigen, family D. 2 (MAGED2), transcript variant 2 NM\_177434 Homo sapiens FtsJ homolog 1 (E. coli) (FTSJ1), transcript variant 2, mRNA NM\_177435 Homo sapiens peroxisome proliferative activated receptor, delta (PPARD), tn NM 177436 Homo sapiens CSE1 chromosome segregation 1-like (yeast) (CSE1L), transi NM\_177437 Homo sapiens taste receptor, type 2, member 60 (TAS2R60), mRNA NM\_177438 Homo saplens Dicer1, Dcr-1 homolog (Drosophila) (DICER1), transcript varia NM\_177439 Homo sapiens FtsJ homolog 1 (E. coli) (FTSJ1), transcript variant 3, mRNA NM 177441 Homo sapiens hypothetical protein MGC3123 (MGC3123), mRNA NM 177442 Homo sapiens FtsJ homolog 2 (E. coli) (FTSJ2), transcript variant 2, mRNA NM 177444 Homo sapiens PTPRF Interacting protein, binding protein 1 (liprin beta 1) (PF NM\_177452 Homo sapiens trafficking protein particle complex 6B (TRAPPC6B), mRNA NM\_177453 Homo sapiens progestin and adipoQ receptor family member III (PAQR3), m NM\_177454 Homo sapiens KIAA1946 (KIAA1946), mRNA NM\_177455 Homo sapiens class II bHLH protein MIST1 (MIST1), mRNA NM\_177456 Homo saplens melanoma antigen, family C, 3 (MAGEC3), transcript variant 2 NM 177457 Homo sapiens Ly-6 neurotoxin-like protein 1 (LYNX1), transcript variant 3, m NM\_177458 Homo sapiens secreted Ly6/uPAR related protein 2 (SLURP2), mRNA NM 177476 Homo sapiens Ly-6 neurotoxin-like protein 1 (LYNX1), transcript variant 4, m NM 177477 Homo sapiens Ly-6 neurotoxin-like protein 1 (LYNX1), transcript variant 5, m NM 177478 Homo sapiens ferritin mitochondrial (FTMT), mRNA NM 177483 Homo sapiens glycosylphosphatidylinositol specific phospholipase D1 (GPLI NM 177524 Homo sapiens mesoderm specific transcript homolog (mouse) (MEST), trans NM 177525 Homo sapiens mesoderm specific transcript homolog (mouse) (MEST), trans NM 177526 Homo sapiens phosphatidic acid phosphatase type 2C (PPAP2C), transcript NM\_177528 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem

NM 177529 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem

NM 177530 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem NM 177531 Homo sapiens polycystic kidney and hepatic disease 1 (autosomal recessive NM 177532 Homo sapiens Ras association (RalGDS/AF-6) domain family 6 (RASSF6), to NM 177533 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 14 NM 177534 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem NM 177535 Homo sapiens melanoma antigen, family D. 4 (MAGED4), transcript variant 2 NM 177536 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem NM\_177537 Homo sapiens melanoma antigen, family D, 4 (MAGED4), transcript variant 5 NM\_177538 Homo sapiens cytochrome P450, family 20, subfamily A, polypeptide 1 (CYP NM\_177539 Homo sapiens taste receptor, type 1, member 1 (TAS1R1), transcript variant NM 177540 Homo sapiens taste receptor, type 1, member 1 (TAS1R1), transcript variant NM 177541 Homo sapiens taste receptor, type 1, member 1 (TAS1R1), transcript variant NM 177542 Homo sapiens small nuclear ribonucleoprotein D2 polypeptide 16.5kDa (SNF NM 177543 Homo sapiens phosphatidic acid phosphatase type 2C (PPAP2C), transcript NM 177549 Homo sapiens M8 protein (LOC149830), mRNA NM 177550 Homo sapiens solute carrier family 13 (sodium-dependent citrate transporter NM 177551 Homo sapiens G protein-coupled receptor 109A (GPR109A), mRNA NM 177552 Homo sapiens sulfotransferase family, cytosolic, 1A, phenol-preferring, mem NM 177553 Homo sapiens growth arrest-specific 2 (GAS2), transcript variant 2, mRNA NM\_177554 Homo sapiens acid phosphatase 1, soluble (ACP1), transcript variant 1, mRt NM 177555 Homo sapiens trophinin (TRO), transcript variant 1, mRNA NM 177556 Homo saplens trophinin (TRO), transcript variant 2, mRNA NM 177557 Homo sapiens trophinin (TRO), transcript variant 5, mRNA NM 177558 Homo sapiens trophinin (TRO), transcript variant 4, mRNA NM 177559 Homo sapiens casein kinase 2, alpha 1 polypeptide (CSNK2A1), transcript vi NM\_177560 Homo sapiens casein kinase 2, alpha 1 polypeptide (CSNK2A1), transcript v: NM 177924 Homo sapiens N-acylsphingosine amidohydrolase (acid ceramidase) 1 (ASA NM 177925 Homo sapiens H2A histone family, member J (H2AFJ), transcript variant 2, rr NM 177926 Homo saplens CSRP2 binding protein (CSRP2BP), transcript variant 2, mRN NM 177937 Homo saplens golgi phosphoprotein 2 (GOLPH2), transcript variant 2, mRNA NM\_177938 Homo sapiens hypoxia-inducible factor prolyl 4-hydroxylase (PH-4), mRNA NM\_177939 Homo sapiens hypoxia-inducible factor prolyl 4-hydroxylase (PH-4), transcrip NM\_177947 Homo sapiens armadillo repeat containing, X-linked 3 (ARMCX3), transcript v NM\_177948 Homo sapiens armadillo repeat containing, X-linked 3 (ARMCX3), transcript 1 NM\_177949 Homo sapiens armadillo repeat containing, X-linked 2 (ARMCX2), mRNA NM\_177951 Homo sapiens protein phosphatase 1A (formerly 2C), magnesium-dependen NM\_177952 Homo sapiens protein phosphatase 1A (formerly 2C), magnesium-dependen NM 177953 Homo sapiens dynein, cytoplasmic, light polypeptide 2A (DNCL2A), transcrip NM 177954 Homo sapiens dynein, cytoplasmic, light polypeptide 2A (DNCL2A), transcrip NM 177959 Homo sapiens docking protein 5 (DOK5), transcript variant 2, mRNA NM 177963 Homo sapiens synaptotagmin XII (SYT12), mRNA NM\_177964 Homo sapiens hypothetical protein LOC130576 (LOC130576), mRNA NM\_177965 Homo sapiens hypothetical protein LOC157657 (LOC157657), mRNA NM\_177966 Homo sapiens hypothetical protein DKFZp667B1218 (DKFZp667B1218), mF NM\_177967 Homo sapiens phosphoglycerate dehydrogenase like 1 (PHGDHL1), mRNA NM\_177968 Homo sapiens protein phosphatase 1B (formerly 2C), magnesium-dependen NM\_177969 Homo sapiens protein phosphatase 1B (formerly 2C), magnesium-dependen NM 177972 Homo sapiens tubby homolog (mouse) (TUB), transcript variant 2, mRNA NM 177973 Homo sapiens sulfotransferase family, cytosolic, 2B, member 1 (SULT2B1), I NM 177974 Homo sapiens H63 breast cancer expressed gene (H63), transcript variant 2 NM 177976 Homo sapiens ADP-ribosylation factor-like 6 (ARL6), transcript variant 2, mR NM 177977 Homo sapiens huntingtin-associated protein 1 (neuroan 1) (HAP1), transcript NM 177978 Homo sapiens chordin (CHRD), transcript variant 2, mRNA NM 177979 Homo sapiens chordin (CHRD), transcript variant 3, mRNA NM 177980 Homo sapiens cadherin-like 26 (CDH26), transcript variant a, mRNA NM 177983 Homo sapiens protein phosphatase 1G (formerly 2C), magnesium-dependen NM 177985 Homo sapiens ADP-ribosylation factor-like 5 (ARL5), transcript variant 2, mR

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NM\_177986 Homo sapiens desmoglein 4 (DSG4), mRNA NM 177987 Homo sapiens tubulin, beta 8 (TUBB8-pending), mRNA NM 177988 Homo sapiens mitochondrial ribosomal protein L47 (MRPL47), nuclear gene NM\_177989 Homo sapiens actin-like 6A (ACTL6A), transcript variant 2, mRNA NM\_177990 Homo sapiens p21(CDKN1A)-activated kinase 7 (PAK7), transcript variant 2, NM\_177991 Homo sapiens dual specificity phosphatase-like 15 (DUSP15), transcript vari NM\_177995 Homo sapiens protein tyrosine phosphatase domain containing 1 (PTPDC1), NM\_177996 Homo sapiens erythrocyte membrane protein band 4.1-like 1 (EPB41L1), trail NM 177998 Homo sapiens otopetrin 1 (OTOP1), mRNA NM\_177999 Homo sapiens ankyrin repeat and SOCS box-containing 6 (ASB6), transcript NM\_178000 Homo sapiens protein phosphatase 2A, regulatory subunit B' (PR 53) (PPP2I NM\_178001 Homo sapiens protein phosphatase 2A, regulatory subunit B' (PR 53) (PPP2I NM 178002 Homo sapiens protein phosphatase 2A, regulatory subunit B' (PR 53) (PPP2I NM 178003 Homo sapiens protein phosphatase 2A, regulatory subunit B' (PR 53) (PPP2I NM\_178004 Homo sapiens proline nch membrane anchor 1 (PRIMA1), transcript variant I NM\_178006 Homo sapiens START domain containing 13 (STARD13), transcript variant a NM\_178007 Homo sapiens START domain containing 13 (STARD13), transcript variant b NM\_178008 Homo sapiens START domain containing 13 (STARD13), transcript variant d NM\_178009 Homo sapiens diacylglycerol kinase, eta (DGKH), transcript variant 2, mRNA NM\_178010 Homo sapiens SRY (sex determining region Y)-box 5 (SOX5), transcript varia NM\_178011 Homo sapiens leucine rich repeat transmembrane neuronal 3 (LRRTM3), mF NM\_178012 Homo sapiens tubulin, beta polypeptide paralog (MGC8685), mRNA NM\_178013 Homo saplens proline rich membrane anchor 1 (PRIMA1), mRNA NM\_178014 Homo sapiens beta 5-tubulin (OK/SW-cl.56), mRNA NM\_178019 Homo saplens cation channel, sperm associated 3 (CATSPER3), mRNA NM\_178025 Homo sapiens gamma-glutamyltransferase-like 3 (GGTL3), transcript variant NM\_178026 Homo sapiens gamma-glutamyltransferase-like 3 (GGTL3), transcript variant NM\_178031 Homo saplens heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa NM\_178033 Homo sapiens cytochrome P450, family 4, subfamily X, polypeptide 1 (CYP4 NM\_178034 Homo sapiens phospholipase A2, group IVD (cytosolic) (PLA2G4D), mRNA NM\_178037 Homo sapiens Rab6-interacting protein 2 (ELKS), transcript variant beta, mR NM 178038 Homo saplens Rab6-interacting protein 2 (ELKS), transcript variant gamma, NM 178039 Homo sapiens Rab6-interacting protein 2 (ELKS), transcript variant delta, mF NM\_178040 Homo sapiens Rab6-interacting protein 2 (ELKS), transcript variant epsilon, r NM 178042 Homo sapiens actin-like 6A (ACTL6A), transcript variant 3, mRNA NM\_178043 Homo saplens FLJ10378 protein (FLJ10378), transcript variant 2, mRNA NM\_178044 Homo sapiens hypothetical protein MGC5178 (MGC5178), transcript variant NM 178120 Homo sapiens distal-less homeo box 1 (DLX1), mRNA NM\_178121 Homo sapiens HBV pre-s2 binding protein 1 (SBP1), mRNA NM\_178122 Homo sapiens hypothetical protein LOC90529 (LOC90529), mRNA NM\_178123 Homo sapiens SEC14 and spectrin domains 1 (SESTD1), mRNA NM\_178124 Homo sapiens hypothetical protein LOC91966 (LOC91966), mRNA NM 178125 Homo saplens tripartite motif-containing 50A (TRIM50A), mRNA NM\_178126 Homo sapiens hypothetical protein LOC162427 (LOC162427), mRNA NM 178127 Homo sapiens angiopoietin-like 5 (ANGPTL5), mRNA NM 178128 Homo sapiens similar to delta 5 fatty acid desaturase (LOC283985), mRNA NM\_178129 Homo sapiens purinergic receptor P2Y, G-protein coupled, 8 (P2RY8), mRN/ NM\_178130 Homo sapiens thioredoxin domain containing 6 (TXNDC6), mRNA NM\_178134 Homo sapiens cytochrome P450, family 4, subfamily Z, polypeptide 1 (CYP4. NM\_178135 Homo sapiens short-chain dehydrogenase/reductase 9 (SCDR9), mRNA NM 178136 Homo sapiens polymerase (DNA-directed), delta interacting protein 3 (POLD NM\_178138 Homo sapiens LIM homeobox 3 (LHX3), transcript variant 1, mRNA NM\_178140 Homo sapiens PDZ domain containing 3 (PDZK3), transcript variant 1, mRN/ NM\_178145 Homo sapiens Ras association (RalGDS/AF-6) domain family 4 (RASSF4), to

NM\_178148 Homo sapiens solute carrier family 35, member B2 (SLC35B2), mRNA
NM\_178150 Homo sapiens F-box protein, helicase, 18 (FBXO18), transcript variant 2, mF
NM\_178151 Homo sapiens doublecortex; lissencephalv. X-linked (doublecorin) (DCX). tr

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NM 178152 Homo sapiens doublecortex; lissencephaly, X-linked (doublecortin) (DCX), tn
NM_178153 Homo sapiens doublecortex; lissencephaly, X-linked (doublecortin) (DCX), tn
NM 178154 Homo sapiens fucosyltransferase 8 (alpha (1,6) fucosyltransferase) (FUT8), I
NM_178155 Homo sapiens fucosyltransferase 8 (alpha (1,6) fucosyltransferase) (FUT8), i
NM_178156 Homo sapiens fucosyltransferase 8 (alpha (1,6) fucosyltransferase) (FUT8), i
NM_178157 Homo sapiens fucosyltransferase 8 (alpha (1,6) fucosyltransferase) (FUT8), I
NM 178159 Homo sapiens hypothetical protein FLJ12949 (FLJ12949), transcript variant:
NM 178160 Homo sapiens otopetrin 2 (OTOP2), mRNA
NM 178161 Homo sapiens pancreas specific transcription factor, 1a (PTF1A), mRNA
NM 178167 Homo sapiens zinc finger protein 598 (ZNF598), mRNA
NM 178168 Homo sapiens olfactory receptor, family 10, subfamily A, member 5 (OR10At
NM 178169 Homo sapiens Ras association (RalGDS/AF-6) domain family 3 (RASSF3), n
NM_178170 Homo sapiens NIMA (never in mitosis gene a)- related kinase 8 (NEK8), mRI
NM_178171 Homo sapiens gasdermin 1 (GSDM1), mRNA
NM_178172 Homo sapiens high density lipoprotein-binding protein (LOC338328), mRNA
NM_178173 Homo sapiens hypothetical protein LOC339834 (LOC339834), mRNA
NM 178174 Homo sapiens triggering receptor expressed on myeloid cells-like 1 (TREML
NM 178175 Homo sapiens lipoma HMGIC fusion partner-like 1 (LHFPL1), mRNA
NM_178176 Homo sapiens monoacylglycerol O-acyltransferase 3 (MOGAT3), mRNA
NM_178177 Homo sapiens nicotinamide nucleotide adenylyltransferase 3 (NMNAT3), mF
NM_178181 Homo sapiens CUB domain-containing protein 1 (CDCP1), transcript variant
NM_178190 Homo saplens ATPase inhibitory factor 1 (ATPIF1), nuclear gene encoding n
NM 178191 Homo sapiens ATPase inhibitory factor 1 (ATPIF1), nuclear gene encoding n
NM 178221 Homo sapiens APG4 autophagy 4 homolog C (S. cerevisiae) (APG4C), trans
NM_178225 Homo sapiens F-box and WD-40 domain protein 5 (FBXW5), transcript varia
NM_178226 Homo sapiens F-box and WD-40 domain protein 5 (FBXW5), transcript varia
NM_178228 Homo sapiens killer cell immunoglobulin-like receptor, two domains, short cy
NM_178229 Homo sapiens IQ motif containing GTPase activating protein 3 (IQGAP3), ml
NM_178230 Homo sapiens cyclophilin-LC (COAS2), mRNA
NM_178231 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region,
NM 178232 Homo saplens hyaluronan and proteoglycan link protein 3 (HAPLN3), mRNA
NM 178233 Homo sapiens otopetrin 3 (OTOP3), mRNA
NM 178234 Homo saplens tumor suppressor candidate 3 (TUSC3), transcript variant 2, n
 NM_178237 Homo sapiens SEC3-like 1 (S. cerevisiae) (SEC3L1), transcript variant 2, mF
 NM_178238 Homo saplens paired immunoglobin-like type 2 receptor beta (PILRB), transc
 NM_178270 Homo sapiens APG4 autophagy 4 homolog A (S. cerevisiae) (APG4A), trans
 NM_178271 Homo sapiens APG4 autophagy 4 homolog A (S. cerevisiae) (APG4A), trans
 NM_178272 Homo sapiens paired Immunoglobin-like type 2 receptor alpha (PILRA), trans
 NM_178273 Homo sapiens paired immunoglobin-like type 2 receptor alpha (PILRA), trans
 NM_178275 Homo saplens eEF1A2 binding protein (DKFZp434B1231), mRNA
 NM_178276 Homo sapiens chromosome 5 open reading frame 12 (C5orf12), mRNA
 NM 178311 Homo sapiens gamma-glutamyltransferase-like activity 4 (GGTLA4), transcrip
 NM 178312 Homo sapiens gamma-glutamyltransferase-like activity 4 (GGTLA4), transcri
 NM 178313 Homo sapiens spectrin, beta, non-erythrocytic 1 (SPTBN1), transcript variant
 NM_178314 Homo saplens hypothetical protein FLJ39378 (FLJ39378), mRNA
 NM_178324 Homo sapiens serine palmitoyltransferase, long chain base subunit 1 (SPTL)
 NM_178326 Homo sapiens APG4 autophagy 4 homolog B (S. cerevisiae) (APG4B), trans
 NM_178329 Homo sapiens chemokine (C-C motif) receptor 3 (CCR3), transcript variant 2
 NM_178331 Homo sapiens gonadotropin-releasing hormone 2 (GNRH2), transcript variar
 NM_178332 Homo sapiens gonadotropin-releasing hormone 2 (GNRH2), transcript variar
 NM_178335 Homo sapiens chromosome 3 open reading frame 6 (C3orf6), transcript varie
 NM 178336 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene
 NM_178338 Homo sapiens AP20 region protein (APRG1), transcript variant A, mRNA
 NM 178339 Homo sapiens AP20 region protein (APRG1), transcript variant B, mRNA
 NM 178340 Homo sapiens AP20 region protein (APRG1), transcript variant C, mRNA
 NM_178341 Homo sapiens AP20 region protein (APRG1), transcript variant D, mRNA
 NM_178342 Homo sapiens AP20 region protein (APRG1), transcript variant E, mRNA
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NM 178343 Homo sapiens AP20 region protein (APRG1), transcript variant F, mRNA NM 178344 Homo sapiens AP20 region protein (APRG1), transcript variant G, mRNA NM 178348 Homo sapiens late envelope protein 1 (LEP1), mRNA NM\_178349 Homo sapiens small proline rich-like (epidermal differentiation complex) 2A (-NM\_178351 Homo sapiens late envelope protein 3 (LEP3), mRNA NM\_178352 Homo sapiens late envelope protein 4 (LEP4), mRNA NM 178353 Homo sapiens late envelope protein 5 (LEP5), mRNA NM 178354 Homo sapiens late envelope protein 6 (LEP6), mRNA NM 178356 Homo sapiens small proline rich-like (epidermal differentiation complex) 4A (-NM 178422 Homo sapiens membrane progestin receptor alpha (MPRA), mRNA NM\_178423 Homo sapiens histone deacetylase 9 (HDAC9), transcript variant 4, mRNA NM 178424 Homo sapiens SRY (sex determining region Y)-box 30 (SOX30), transcript ve NM 178425 Homo sapiens histone deacetylase 9 (HDAC9), transcript variant 5, mRNA NM\_178426 Homo sapiens aryl hydrocarbon receptor nuclear translocator (ARNT), transc NM\_178427 Homo sapiens aryl hydrocarbon receptor nuclear translocator (ARNT), transc NM\_178428 Homo sapiens late envelope protein 9 (LEP9), mRNA NM\_178429 Homo sapiens late envelope protein 11 (LEP11), mRNA NM\_178430 Homo sapiens small proline rich-like (epidermal differentiation complex) 1A (. NM\_178431 Homo sapiens late envelope protein 13 (LEP13), mRNA NM\_178432 Homo sapiens cell cycle related kinase (CCRK), transcript variant 1, mRNA NM 178433 Homo sapiens late envelope protein 14 (LEP14), mRNA NM 178434 Homo sapiens small proline rich-like (epidermal differentiation complex) 3A ( NM\_178435 Homo sapiens late envelope protein 17 (LEP17), mRNA NM\_178438 Homo sapiens small proline rich-like (epidermal differentiation complex) 5A (. NM\_178439 Homo sapiens germ cell-less homolog 1 (Drosophila) (GCL), mRNA NM\_178441 Homo sapiens zinc finger, FYVE domain containing 1 (ZFYVE1), transcript vi NM\_178443 Homo sapiens UNC-112 related protein 2 (URP2), transcript variant URP2LF NM\_178445 Homo sapiens chemokine (C-C motif) receptor-like 1 (CCRL1), transcript var NM\_178448 Homo sapiens chromosome 9 open reading frame 140 (C9orf140), mRNA NM\_178449 Homo sapiens tuberoinfundibular 39 residue protein precursor (TIP39), mRN NM\_178450 Homo sapiens hypothetical protein MGC48332 (MGC48332), mRNA NM\_178451 Homo sapiens zinc finger, MYND domain containing 17 (ZMYND17), mRNA NM\_178452 Homo sapiens similar to RIKEN cDNA 4930457P18 (LOC123872), mRNA NM\_178453 Homo saplens hypothetical protein MGC52282 (MGC52282), mRNA NM\_178454 Homo sapiens hypothetical protein MGC54289 (MGC54289), mRNA NM\_178456 Homo sapiens chromosome 20 open reading frame 85 (C20orf85), mRNA NM\_178460 Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1-li NM\_178463 Homo saplens chromosome 20 open reading frame 166 (C20orf166), mRNA NM\_178465 Homo sapiens TSPY-like 3 (TSPYL3), mRNA NM\_178466 Homo saplens chromosome 20 open reading frame 71 (C20orf71), mRNA NM\_178467 Homo sapiens high-mobility group (nonhistone chromosomal) protein 4-like ( NM\_178468 Homo saplens chromosome 20 open reading frame 128 (C20orf128), mRNA NM\_178470 Homo sapiens WD repeat domain 40B (WDR40B), mRNA NM\_178471 Homo sapiens G protein-coupled receptor 119 (GPR119), mRNA NM\_178472 Homo sapiens chromosome 20 open reading frame 53 (C20orf53), mRNA NM\_178477 Homo sapiens chromosome 20 open reading frame 179 (C20orf179), mRNA NM\_178483 Homo sapiens chromosome 20 open reading frame 79 (C20orf79), mRNA NM\_178491 Homo sapiens R3H domain (binds single-stranded nucleic acids) containing-NM\_178493 Homo sapiens hypothetical protein LOC147111 (LOC147111), mRNA NM\_178494 Homo sapiens hypothetical protein FLJ40125 (FLJ40125), mRNA NM\_178495 Homo sapiens KIAA1754-like (KIAA1754L), mRNA NM\_178496 Homo sapiens similar to BcDNA:GH11415 gene product (LOC151963), mRN NM\_178497 Homo sapiens hypothetical protein FLJ23657 (FLJ23657), mRNA NM\_178498 Homo sapiens hypothetical protein MGC52019 (MGC52019), mRNA NM\_178499 Homo sapiens hypothetical protein MGC39827 (MGC39827), mRNA NM\_178500 Homo sapiens phosphatase, orphan 1 (PHOSPHO1), mRNA NM\_178502 Homo sapiens deltex 3 homolog (Drosophila) (DTX3), mRNA

NM\_178504 Homo sapiens hypothetical protein FLJ40427 (FLJ40427), mRNA NM\_178505 Homo sapiens transmembrane protein 26 (TMEM26), mRNA NM\_178507 Homo sapiens NS5ATP13TP2 protein (NS5ATP13TP2), mRNA NM\_178508 Homo sapiens hypothetical protein MGC57858 (MGC57858), mRNA NM\_178509 Homo sapiens syntaxin binding protein 4 (STXBP4), mRNA NM\_178510 Homo sapiens ankyrin repeat and kinase domain containing 1 (ANKK1), mRI NM\_178514 Homo sapiens hypothetical protein LOC283487 (LOC283487), mRNA NM 178516 Homo sapiens hypothetical protein LOC283849 (LOC283849), mRNA NM 178517 Homo sapiens phosphatldylinositol glycan, class W (PIGW), mRNA NM 178518 Homo sapiens hypothetical protein FLJ36878 (FLJ36878), mRNA NM 178519 Homo sapiens hypothetical protein FLJ39421 (FLJ39421), mRNA NM 178520 Homo sapiens hypothetical protein FLJ38792 (FLJ38792), mRNA NM 178523 Homo sapiens zinc finger protein 616 (ZNF616), mRNA NM 178525 Homo sapiens hypothetical protein MGC33407 (MGC33407), mRNA NM\_178527 Homo sapiens hypothetical protein MGC43026 (MGC43026), mRNA NM\_178530 Homo sapiens hypothetical protein FLJ38379 (FLJ38379), mRNA NM\_178532 Homo sapiens hypothetical protein LOC285671 (LOC285671), mRNA NM\_178536 Homo sapiens lipocalin 12 (LCN12), mRNA NM\_178537 Homo sapiens beta1,4-N-acetylgalactosaminyltransferases IV (Beta4GalNAc NM\_178538 Homo sapiens hypothetical protein LOC338799 (LOC338799), mRNA NM\_178539 Homo sapiens TAFA2 protein (TAFA2), mRNA NM 178540 Homo saplens hypothetical protein MGC48915 (MGC48915), mRNA NM 178542 Homo sapiens hypothetical protein DKFZp762C2414 (DKFZp762C2414), mF NM 178543 Homo sapiens ectonucleotide pyrophosphatase/phosphodiesterase 7 (ENPF NM 178544 Homo sapiens zinc finger protein 546 (ZNF546), mRNA NM\_178545 Homo sapiens hypothetical protein LOC339456 (LOC339456), mRNA NM\_178546 Homo sapiens hypothetical protein LOC339483 (LOC339483), mRNA NM\_178547 Homo sapiens archease (ARCH), mRNA NM\_178548 Homo sapiens adaptor-related protein complex 2, epsilon subunit (AP2E), ml NM\_178549 Homo sapiens hypothetical protein MGC42493 (MGC42493), mRNA NM\_178550 Homo sapiens hypothetical protein MGC48998 (MGC48998), mRNA NM 178552 Homo sapiens hypothetical protein MGC35206 (MGC35206), mRNA NM 178553 Homo sapiens hypothetical protein MGC44505 (MGC44505), mRNA NM 178554 Homo sapiens kyphoscoliosis peptidase (KY), mRNA NM\_178555 Homo sapiens hypothetical protein FLJ25770 (FLJ25770), mRNA NM 178556 Homo sapiens hypothetical protein FLJ36180 (FLJ36180), mRNA NM 178557 Homo sapiens hypothetical protein FLJ37478 (FLJ37478), mRNA NM\_178558 Homo saplens hypothetical protein FLJ90430 (FLJ90430), mRNA NM\_178559 Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 5 (A NM\_178562 Homo sapiens hypothetical protein MGC50844 (MGC50844), mRNA NM\_178563 Homo sapiens hypothetical protein LOC340351 (LOC340351), mRNA NM\_178564 Homo sapiens hypothetical protein LOC340371 (LOC340371), mRNA NM\_178565 Homo saplens hypothetical protein MGC35555 (MGC35555), mRNA NM 178566 Homo sapiens zinc finger, DHHC domain containing 21 (ZDHHC21), mRNA NM 178568 Homo sapiens reticulon 4 receptor-like 1 (RTN4RL1), mRNA NM 178569 Homo sapiens CEI protein (CEI), mRNA NM 178570 Homo sapiens reticulon 4 receptor-like 2 (RTN4RL2), mRNA NM\_178571 Homo sapiens hypothetical protein MGC51025 (MGC51025), mRNA NM\_178578 Homo sapiens proteasome (prosome, macropain) inhibitor subunit 1 (Pl31) ( NM\_178579 Homo sapiens proteasome (prosome, macropain) inhibitor subunit 1 (Pl31) ( NM\_178580 Homo sapiens histocompatibility (minor) 13 (HM13), transcript variant 2, mRi NM\_178581 Homo sapiens histocompatibility (minor) 13 (HM13), transcript variant 3, mRI NM 178582 Homo sapiens histocompatibility (minor) 13 (HM13), transcript variant 4, mRI NM\_178583 Homo sapiens WD repeat and FYVE domain containing 3 (WDFY3), transcri NM\_178584 Homo sapiens septin 10 (SEPT10), transcript variant 2, mRNA

NM\_178585 Homo sapiens WD repeat and FYVE domain containing 3 (WDFY3), transcri NM\_178586 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), gamma isc

NM 178587 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), gamma isc NM\_178588 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), gamma isc NM\_178812 Homo sapiens LYRIC/3D3 (LYRIC), mRNA NM\_178813 Homo sapiens A-kinase anchoring protein 28 (AKAP28), mRNA NM 178814 Homo sapiens adaptor-related protein complex 1, sigma 3 subunit (AP1S3), NM 178815 Homo sapiens ADP-ribosylation factor-like 8 (ARL8), mRNA NM 178816 Homo sapiens cancer susceptibility candidate 2 (CASC2), mRNA NM 178817 Homo sapiens chromosome 21 open reading frame 61 (C21orf61), transcript NM 178818 Homo sapiens chemokine-like factor super family 4 (CKLFSF4), transcript va NM 178819 Homo sapiens putative lysophosphatidic acid acyltransferase (DKFZp586M1 NM 178820 Homo sapiens F-box protein 27 (FBXO27), mRNA NM 178821 Homo sapiens hypothetical protein FLJ25955 (FLJ25955), mRNA NM\_178822 Homo sapiens immunoglobulin superfamily, member 10 (IGSF10), mRNA NM\_178823 Homo sapiens chromosome 6 open reading frame 165 (C6orf165), mRNA NM\_178824 Homo sapiens hypothetical protein FLJ3362O (FLJ33620), mRNA NM\_178826 Homo sapiens transmembrane protein 16D (TMEM16D), mRNA NM\_178827 Homo saplens hypothetical protein FLJ35834 (FLJ35834), mRNA NM\_178828 Homo sapiens chromosome 9 open reading frame 79 (C9orf79), mRNA NM\_178829 Homo sapiens chromosome 7 open reading frame 34 (C7orf34), mRNA NM\_178830 Homo sapiens hypothetical protein FLJ36888 (FLJ36888), mRNA NM\_178831 Homo sapiens opposite strand transcription unit to STAG3 (GATS), mRNA NM 178832 Homo saplens chromosome 10 open reading frame 83 (C10orf83), mRNA NM 178833 Homo sapiens hypothetical protein BC009732 (LOC133308), mRNA NM\_178834 Homo sapiens layilin (LOC143903), mRNA NM\_178835 Homo sapiens hypothetical protein LOC152485 (LOC152485), mRNA NM\_178836 Homo sapiens similar to CG12314 gene product (LOC201164), mRNA NM\_178837 Homo saplens similar to hypothetical testis protein from macaque (LOC3529 NM\_178838 Homo sapiens hypothetical protein LOC90768 (MGC45800), mRNA NM\_178839 Homo sapiens leucine rich repeat transmembrane neuronal 1 (LRRTM1), mF NM\_178840 Homo saplens hypothetical protein MGC24047 (MGC24047), mRNA NM\_178841 Homo saplens ring finger protein 166 (RNF166), mRNA NM\_178842 Homo saplens LAG1 longevity assurance homolog 3 (S. cerevisiae) (LASS3) NM 178844 Homo sapiens NOD3 protein (NOD3), mRNA NM 178849 Homo sapiens hepatocyte nuclear factor 4, alpha (HNF4A), transcript variant NM\_178850 Homo sapiens hepatocyte nuclear factor 4, alpha (HNF4A), transcript variant NM\_178857 Homo saplens retinitis pigmentosa 1-like 1 (RP1L1), mRNA NM 178858 Homo sapiens sideroflexin 2 (SFXN2), mRNA NM\_178859 Homo sapiens organic solute transporter beta (OSTbeta), mRNA NM\_178860 Homo saplens selzure related 6 homolog (mouse) (SEZ6), mRNA NM\_178861 Homo sapiens zinc finger protein 183-like 1 (ZNF183L1), mRNA NM\_178862 Homo sapiens source of immunodominant MHC-associated peptides (SIMP) NM\_178863 Homo sapiens potassium channel tetramerisation domain containing 13 (KC NM 178864 Homo saplens HLH-PAS transcription factor NXF (NXF), mRNA NM 178865 Homo sapiens tumor differentially expressed 2-like (TDE2L), mRNA NM 178867 Homo sapiens sideroflexin 4 (SFXN4), transcript variant 2, mRNA NM\_178868 Homo sapiens chemokine-like factor super family 8 (CKLFSF8), mRNA NM\_180699 Homo sapiens U11/U12 snRNP 35K (U1SNRNPBP), transcript variant 3, mR NM\_180703 Homo sapiens U11/U12 snRNP 35K (U1SNRNPBP), transcript variant 4, mR NM\_180976 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), delta Isofo NM\_180977 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), delta isofo NM 180981 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM\_180982 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM 180989 Homo sapiens intimal thickness-related receptor (ITR), mRNA NM 180990 Homo sapiens ligand-gated ion channel subunit (LGICZ), mRNA NM 180991 Homo sapiens solute carrier organic anion transporter family, member 4C1 (

NM\_181041 Homo sapiens polybromo 1 (PB1), mRNA NM\_181042 Homo sapiens polybromo 1 (PB1), mRNA

NM\_181050 Homo sapiens axin 1 (AXIN1), transcript variant 2, mRNA NM\_181054 Homo sapiens hypoxia-inducible factor 1, alpha subunit (basic helix-loop-heli NM 181076 Homo sapiens golgin-67 (GOLGIN-67), transcript variant 2, mRNA NM 181077 Homo sapiens golgin-67 (GOLGIN-67), transcript variant 3, mRNA NM 181078 Homo sapiens interleukin 21 receptor (IL21R), transcript variant 2, mRNA NM 181079 Homo sapiens interleukin 21 receptor (IL21R), transcript variant 3, mRNA NM\_181093 Homo sapiens ezrin-binding partner PACE-1 (PACE-1), transcript variant 2, r NM\_181265 Homo sapiens WD repeat domain 17 (WDR17), transcript variant 2, mRNA NM\_181268 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181269 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181270 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181271 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181272 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181283 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181285 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181286 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181287 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181288 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181289 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181290 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181291 Homo sapiens WD repeat domain 20 (WDR20), transcript variant 1, mRNA NM\_181292 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181293 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181294 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181295 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181296 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181297 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM 181298 Homo saplens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181299 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181300 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181301 Homo sapiens chemokine-like factor super family 1 (CKLFSF1), transcript va NM\_181302 Homo saplens WD repeat domain 20 (WDR20), transcript variant 4, mRNA NM\_181304 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM 181305 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM 181306 Homo saplens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM 181307 Homo sapiens mitochondrial ribosomal protein L52 (MRPL52), nuclear gene NM 181308 Homo sapiens WD repeat domain 20 (WDR20), transcript variant 3, mRNA NM 181309 Homo sapiens interleukin 22 receptor, alpha 2 (IL22RA2), transcript variant 2 NM\_181310 Homo sapiens interleukin 22 receptor, alpha 2 (IL22RA2), transcript variant 3 NM\_181311 Homo sapiens tafazzin (cardiomyopathy, dilated 3A (X-linked); endocardial fi NM\_181312 Homo sapiens tafazzin (cardiomyopathy, dilated 3A (X-linked); endocardial fi NM\_181313 Homo sapiens tafazzin (cardiomyopathy, dilated 3A (X-linked); endocardial fi NM\_181314 Homo saplens tafazzin (cardiomyopathy, dilated 3A (X-linked); endocardial fi NM\_181332 Homo sapiens neuroligin 4, X-linked (NLGN4X), transcript variant 2, mRNA NM\_181333 Homo sapiens Rho GTPase activating protein 8 (ARHGAP8), transcript varia NM\_181334 Homo sapiens Rho GTPase activating protein 8 (ARHGAP8), transcript varia NM 181335 Homo saplens Rho GTPase activating protein 8 (ARHGAP8), transcript varia NM 181336 Homo sapiens LEM domain containing 2 (LEMD2), mRNA NM 181337 Homo sapiens kidney associated antigen 1 (KAAG1), mRNA NM\_181339 Homo sapiens interleukin 24 (IL24), transcript variant 2, mRNA NM\_181340 Homo sapiens WD repeat domain 21 (VVDR21), transcript variant 2, mRNA NM\_181341 Homo sapiens WD repeat domain 21 (VVDR21), transcript variant 3, mRNA NM\_181342 Homo sapiens FK506 binding protein 7 (FKBP7), transcript variant 2, mRNA NM\_181349 Homo sapiens SMAD specific E3 ubiquitin protein ligase 1 (SMURF1), transc NM 181351 Homo sapiens neural cell adhesion molecule 1 (NCAM1), mRNA NM 181353 Homo sapiens inhibitor of DNA binding 1, dominant negative helix-loop-helix NM 181354 Homo sapiens oxidation resistance 1 (OXR1), mRNA

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NM\_181355 Homo sapien's frequently rearranged in advanced T-cell lymphomas (FRAT1) NM\_181356 Homo sapien's suppressor of Ty 3 homolog (S. cerevisiae) (SUPT3H), mRNA NM 181357 Homo sapiens WD repeat domain 23 (WDR23), transcript variant 2, mRNA NM\_181358 Homo sapiens homeodomain interacting protein kinase 1 (HIPK1), transcript NM\_181359 Homo sapiens interleukin 6 receptor (IL6R), transcript variant 2, mRNA NM\_181361 Homo sapiens potassium large conductance calcium-activated channel, subt NM 181425 Homo sapiens Friedreich ataxia (FRDA), nuclear gene encoding mitochondri NM 181427 Homo sapiens GA binding protein transcription factor, beta subunit 2, 47kDa NM 181428 Homo sapiens thymosin-like 6 (TMSL6), mRNA NM 181429 Homo sapiens candidate taste receptor hT2R55 (hT2R55), mRNA NM 181430 Homo sapiens forkhead box K2 (FOXK2), transcript variant 2, mRNA NM 181431 Homo sapiens forkhead box K2 (FOXK2), transcript variant 3, mRNA NM 181435 Homo sapiens C1g and tumor necrosis factor related protein 3 (C1QTNF3), r NM\_181441 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181442 Homo sapiens activity-dependent neuroprotector (ADNP), transcript variant 2 NM\_181443 Homo sapiens BTB (POZ) domain containing 3 (BTBD3), transcript variant 2. NM\_181446 Homo sapiens follicle stimulating hormone receptor (FSHR), transcript variar NM\_181449 Homo sapiens immune receptor expressed on myeloid cells 2 (IREM2), mRN NM\_181453 Homo sapiens GRIP and coiled-coil domain containing 2 (GCC2), transcript NM\_181454 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181455 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181456 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181457 Homo sapiens paired box gene 3 (Waardenburg syndrome 1) (PAX3), transc NM 181458 Homo sapiens paired box gene 3 (Waardenburg syndrome 1) (PAX3), transc NM 181459 Homo saplens paired box gene 3 (Waardenburg syndrome 1) (PAX3), transc NM\_181460 Homo sapiens paired box gene 3 (Waardenburg syndrome 1) (PAX3), transc NM\_181461 Homo sapiens paired box gene 3 (Waardenburg syndrome 1) (PAX3), transc NM\_181462 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181463 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181464 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181465 Homo sapiens mitochondrial ribosomal protein L55 (MRPL55), nuclear gene NM\_181466 Homo sapiens integrin beta 4 binding protein (ITGB4BP), transcript variant 4 NM\_181467 Homo sapiens Integrin beta 4 binding protein (ITGB4BP), transcript variant 5 NM\_181468 Homo sapiens integrin beta 4 binding protein (ITGB4BP), transcript variant 2 NM 181469 Homo sapiens integrin beta 4 binding protein (ITGB4BP), transcript variant 3 NM\_181471 Homo sapiens replication factor C (activator 1) 2, 40kDa (RFC2), transcript v NM\_181472 Homo sapiens chemokine-like factor super family 7 (CKLFSF7), transcript va NM\_181481 Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript ve NM\_181482 Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript ve NM\_181483 Homo sapiens chromosome 18 open reading frame 1 (C18orf1), transcript ve NM\_181484 Homo sapiens KIAA1847 (KIAA1847), transcript variant 2, mRNA NM\_181485 Homo sapiens KIAA1847 (KIAA1847), transcript variant 3, mRNA NM\_181486 Homo sapiens T-box 5 (TBX5), transcript variant 4, mRNA NM\_181489 Homo sapiens zinc finger protein 445 (ZNF445), mRNA NM 181491 Homo sapiens surfeit 5 (SURF5), transcript variant c, mRNA NM 181492 Homo sapiens transcription factor 20 (AR1) (TCF20), transcript variant 2, mF NM 181493 Homo sapiens inosine triphosphatase (nucleoside triphosphate pyrophospha NM\_181500 Homo sapiens cut-like 1, CCAAT displacement protein (Drosophila) (CUTL1) NM\_181501 Homo sapiens integrin, alpha 1 (ITGA1), mRNA NM\_181502 Homo sapiens serine protease inhibitor-like, with Kunitz and WAP domains 1 NM\_181503 Homo sapiens exosome component 8 (EXOSC8), mRNA NM\_181504 Homo sapiens phosphoinositide-3-kinase, regulatory subunit, polypeptide 1 ( NM\_181505 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 1B (dopa NM 181506 Homo sapiens synleurin (SLRN), mRNA NM 181507 Homo sapiens Hermansky-Pudlak syndrome 5 (HPS5), transcript variant 1, r NM 181508 Homo sapiens Hermansky-Pudlak syndrome 5 (HPS5), transcript variant 3, r NM 181509 Homo sapiens microtubule-associated protein 1 light chain 3 alpha (MAP1LC

NM\_181510 Homo sapiens WAP four-disulfide core domain 8 (WFDC8), transcript varian NM\_181512 Homo sapiens mitochondrial ribosomal protein L21 (MRPL21), nuclear gene NM\_181513 Homo sapiens mitochondrial ribosomal protein L21 (MRPL21), nuclear gene NM\_181514 Homo sapiens mitochondrial ribosomal protein L21 (MRPL21), nuclear gene NM\_181515 Homo sapiens mitochondrial ribosomal protein L21 (MRPL21), nuclear gene NM\_181519 Homo sapiens synaptotagmin XV (SYT15), transcript variant b, mRNA NM\_181521 Homo sapiens chemokine-like factor super family 4 (CKLFSF4), transcript va NM 181522 Homo sapiens WAP four-disulfide core domain 3 (WFDC3), transcript varian NM 181523 Homo sapiens p hosphoinositide-3-kinase, regulatory subunit, polypeptide 1 ( NM 181524 Homo sapiens phospholnositide-3-kinase, regulatory subunit, polypeptide 1 ( NM 181525 Homo sapiens WAP four-disulfide core domain 3 (WFDC3), transcript varian NM 181526 Homo sapiens myosin, light polypeptide 9, regulatory (MYL9), transcript varia NM 181527 Homo sapiens N-acetyltransferase 5 (ARD1 homolog, S. cerevisiae) (NAT5), NM\_181528 Homo sapiens N-acetyltransferase 5 (ARD1 homolog, S. cerevisiae) (NAT5), NM\_181530 Homo saplens WAP four-disulfide core domain 3 (WFDC3), transcript varian NM\_181531 Homo sapiens butyrophilin, subfamily 2, member A2 (BTN2A2), transcript va NM\_181532 Homo sapiens ES cell expressed Ras (ERAS), mRNA NM\_181533 Homo sapiens chromosome 14 open reading frame 29 (C14orf29), transcript NM\_181534 Homo sapiens keratin 25A (KRT25A), mRNA NM\_181535 Homo sapiens keratin 25D (KRT25D), mRNA NM\_181536 Homo sapiens polycystic kidney disease 1-like 3 (PKD1L3), mRNA NM 181537 Homo sapiens keratin 25C (KRT25C), mRNA NM\_181538 Homo sapiens gap junction protein, epsilon 1, 29kDa (GJE1), mRNA NM\_181539 Homo sapiens keratin 25B (KRT25B), mRNA NM\_181552 Homo sapiens cut-like 1, CCAAT displacement protein (Drosophila) (CUTL1) NM\_181553 Homo sapiens ch emokine-like factor super family 3 (CKLFSF3), transcript va NM\_181554 Homo sapiens chemokine-like factor super family 3 (CKLFSF3), transcript va NM\_181555 Homo sapiens chemokine-like factor super family 3 (CKLFSF3), transcript va NM\_181558 Homo sapiens replication factor C (activator 1) 3, 38kDa (RFC3), transcript v NM\_181571 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_181572 Homo sapiens regulator of G-protein signalling like 1 (RGSL1), mRNA NM\_181573 Homo sapiens replication factor C (activator 1) 4, 37kDa (RFC4), transcript v NM\_181575 Homo sapiens articlent ublquitous protein 1 (AUP1), transcript variant 2, mRN NM\_181576 Homo saplens an cient ubiquitous protein 1 (AUP1), transcript variant 3, mRN NM\_181578 Homo saplens replication factor C (activator 1) 5, 36.5kDa (RFC5), transcript NM\_181581 Homo saplens protein similar to E.coli yhdg and R. capsulatus nifR3 (PP35), NM\_181597 Homo sapiens urildine phosphorylase 1 (UPP1), transcript variant 2, mRNA NM\_181598 Homo saplens spastic paraplegia 3A (autosomal dominant) (SPG3A), mRNA NM\_181599 Homo saplens ke ratin associated protein 13-1 (KRTAP13-1), mRNA NM\_181600 Homo saplens ke ratin associated protein 13-4 (KRTAP13-4), mRNA NM\_181602 Homo sapiens ke ratin associated protein 6-1 (KRTAP6-1), mRNA NM 181604 Homo sapiens ke ratin associated protein 6-2 (KRTAP6-2), mRNA NM 181605 Homo saplens ke ratin associated protein 6-3 (KRTAP6-3), mRNA NM\_181607 Homo sapiens ke ratin associated protein 19-1 (KRTAP19-1), mRNA NM\_181608 Homo sapiens ke ratin associated protein 19-2 (KRTAP19-2), mRNA NM\_181609 Homo sapiens ke ratin associated protein 19-3 (KRTAP19-3), mRNA NM\_181610 Homo sapiens ke ratin associated protein 19-4 (KRTAP19-4), mRNA NM\_181611 Homo sapiens ke ratin associated protein 19-5 (KRTAP19-5), mRNA NM\_181612 Homo sapiens ke ratin associated protein 19-6 (KRTAP19-6), mRNA NM\_181614 Homo sapiens ke ratin associated protein 19-7 (KRTAP19-7), mRNA NM\_181615 Homo sapiens keratin associated protein 20-1 (KRTAP20-1), mRNA NM\_181616 Homo sapiens kerratin associated protein 20-2 (KRTAP20-2), mRNA NM 181617 Homo sapiens keratin associated protein 21-2 (KRTAP21-2), mRNA NM 181618 Homo sapiens chemokine-like factor super family 5 (CKLFSF5), transcript va NM 181619 Homo sapiens ker atin associated protein 21-1 (KRTAP21-1), mRNA NM\_181620 Homo sapiens keratin associated protein 22-1 (KRTAP22-1), mRNA NM\_181621 Homo sapiens keratin associated protein 13-2 (KRTAP13-2), nuclear gene e

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NM 181622 Homo sapiens keratin associated protein 13-3 (KRTAP13-3), mRNA NM 181623 Homo sapiens keratin associated protein 15-1 (KRTAP15-1), mRNA NM\_181624 Homo sapiens keratin associated protein 23-1 (KRTAP23-1), mRNA NM\_181640 Homo sapiens chemokine-like factor (CKLF), transcript variant 2, mRNA NM 181641 Homo sapiens chemokine-like factor (CKLF), transcript variant 4, mRNA NM 181642 Homo sapiens serine protease inhibitor, Kunitz type 1 (SPINT1), transcript νε NM 181643 Homo sapiens hypothetical protein LOC128344 (LOC128344), mRNA NM 181644 Homo sapiens hypothetical protein DKFZp761N1114 (DKFZp761N1114), mF NM 181645 Homo sapiens hypothetical protein FLJ25393 (FLJ25393), mRNA NM 181646 Homo sapiens hypothetical protein FLJ32110 (FLJ32110), mRNA NM\_181647 Homo sapiens hypothetical protein LOC285398 (LOC285398), mRNA NM\_181651 Homo sapiens peroxiredoxin 5 (PRDX5), nuclear gene encoding mitochondri NM\_181652 Homo sapiens peroxiredoxin 5 (PRDX5), nuclear gene encoding mitochondri NM 181654 Homo sapiens complexin 4 (CPLX4), mRNA NM 181655 Homo sapiens hypothetical protein LOC284018 (LOC284018), transcript vari NM 181656 Homo sapiens hypothetical protein LOC284018 (LOC284018), transcript vari NM 181657 Homo sapiens leukotriene B4 receptor (LTB4R), mRNA NM 181659 Homo sapiens nuclear receptor coactivator 3 (NCOA3), transcript variant 1, r NM 181661 Homo sapiens Cohen syndrome 1 (COH1), transcript variant 4, mRNA NM 181670 Homo sapiens E2a-Pbx1-associated protein (EB-1), transcript variant 2, mR1 NM\_181671 Homo sapiens phosphatidylinositol transfer protein, cytoplasmic 1 (PITPNC1 NM\_181672 Homo sapiens O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine) NM 181673 Homo sapiens O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine) NM 181674 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM\_181675 Homo saplens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM\_181676 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM\_181677 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM 181678 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF NM 181679 Homo saplens NFS1 nitrogen fixation 1 (S. cerevisiae) (NFS1), nuclear gene NM 181684 Homo sapiens keratin associated protein 12-2 (KRTAP12-2), mRNA NM 181686 Homo sapiens keratin associated protein 12-1 (KRTAP12-1), mRNA NM 181688 Homo sapiens keratin associated protein 10-10 (KRTAP10-10), mRNA NM 181689 Homo sapiens neuronatin (NNAT), transcript variant 2, mRNA NM\_181690 Homo sapiens v-akt murine thymoma viral oncogene homolog 3 (protein kina NM 181696 Homo sapiens peroxiredoxin 1 (PRDX1), transcript variant 2, mRNA NM 181697 Homo sapiens peroxiredoxin 1 (PRDX1), transcript variant 3, mRNA NM\_181698 Homo sapiens chromosome 10 open reading frame 9 (C10orf9), mRNA NM\_181699 Homo saplens protein phosphatase 2 (formerly 2A), regulatory subunit A (PF NM 181701 Homo saplens quiescin Q6-like 1 (QSCN6L1), mRNA NM 181702 Homo sapiens GTP binding protein overexpressed in skeletal muscle (GEM). NM 181703 Homo sapiens gap junction protein, alpha 5, 40kDa (connexin 40) (GJA5), tra NM 181704 Homo sapiens B melanoma antigen family, member 4 (BAGE4), mRNA NM\_181705 Homo sapiens hypothetical protein LOC90624 (LOC90624), mRNA NM\_181706 Homo sapiens zinc finger, CSL domain containing 3 (ZCSL3), mRNA NM 181707 Homo sapiens hypothetical protein LOC124773 (LOC124773), mRNA NM\_181708 Homo sapiens hypothetical protein LOC144233 (LOC144233), mRNA NM\_181709 Homo sapiens hypothetical protein LOC144347 (LOC144347), mRNA NM\_181710 Homo sapiens zinc and ring finger 4 (ZNRF4), mRNA NM\_181711 Homo sapiens GRP1 (general receptor for phosphoinositides 1)-associated s NM\_181712 Homo sapiens hypothetical protein LOC163782 (LOC163782), mRNA NM\_181713 Homo sapiens UBX domain containing 4 (UBXD4), mRNA NM 181714 Homo sapiens chromosome 6 open reading frame 152 (C6orf152), mRNA NM 181715 Homo sapiens transducer of regulated cAMP response element-binding prote NM 181716 Homo sapiens nuclear protein p30 (p30), mRNA NM 181717 Homo sapiens HLA complex group 27 (HCG27), mRNA NM\_181718 Homo sapiens hypothetical protein LOC253982 (LOC253982), mRNA NM\_181719 Homo sapiens hypothetical protein LOC255104 (LOC255104), mRNA

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- NM\_181720 Homo sapiens hypothetical protein LOC257106 (LOC257106), mRNA NM\_181721 Homo sapiens forkhead box R1 (FOXR1), mRNA NM\_181722 Homo sapiens hypothetical protein LOC285908 (LOC285908), mRNA NM 181723 Homo sapiens hypothetical protein LOC286097 (LOC286097), mRNA NM 181724 Homo sapiens hypothetical protein LOC338773 (LOC338773), mRNA NM\_181725 Homo sapiens hypothetical protein FLJ12760 (FLJ12760), mRNA NM 181726 Homo sapiens low density lipoprotein receptor-related protein binding proteir NM 181727 Homo sapiens spermatogenesis associated 12 (SPATA12), mRNA NM 181733 Homo sapiens component of oligomeric golgi complex 5 (COG5), transcript v NM\_181737 Homo sapiens peroxiredoxin 2 (PRDX2), nuclear gene encoding mitochondri NM\_181738 Homo sapiens peroxiredoxin 2 (PRDX2), nuclear gene encoding mitochondri NM\_181739 Homo sapiens WINS1 protein with Drosophila Lines (Lin) homologous doma NM\_181740 Homo sapiens WINS1 protein with Drosophila Lines (Lin) homologous doma NM\_181741 Homo sapiens origin recognition complex, subunit 4-like (yeast) (ORC4L), tra NM\_181742 Homo sapiens origin recognition complex, subunit 4-like (yeast) (ORC4L), tra NM 181744 Homo sapiens opsin 5 (OPN5), mRNA NM\_181745 Homo sapiens G protein-coupled receptor 120 (GPR120), mRNA NM\_181746 Homo sapiens LAG1 longevity assurance homolog 2 (S. cerevisiae) (LASS2) NM\_181747 Homo sapiens origin recognition complex, subunit 5-like (yeast) (ORC5L), tra NM\_181755 Homo sapiens hydroxysteroid (11-beta) dehydrogenase 1 (HSD11B1), transc NM\_181756 Homo saplens zinc finger protein 233 (ZNF233), mRNA NM\_181762 Homo sapiens ubiquitin-conjugating enzyme E2A (RAD6 homolog) (UBE2A). NM\_181773 Homo sapiens ARP10 protein (ARP10), mRNA NM\_181774 Homo sapiens solute carrier family 36 (proton/amino acid symporter), member NM\_181775 Homo sapiens hypothetical protein DKFZp434G0625 (DKFZp434G0625), mI NM\_181776 Homo sapiens solute carrier family 36 (proton/amino acid symporter), membi NM\_181777 Homo sapiens ubiquitin-conjugating enzyme E2A (RAD6 homolog) (UBE2A), NM\_181780 Homo sapiens B and T lymphocyte associated (BTLA), mRNA NM\_181781 Homo sapiens hypothetical protein FLJ20403 (FLJ20403), transcript variant : NM\_181782 Homo sapiens nuclear receptor coactivator 7 (NCOA7), mRNA NM\_181783 Homo sapiens SMILE protein (SMILE), mRNA NM\_181784 Homo sapiens sprouty-related, EVH1 domain containing 2 (SPRED2), mRNA NM\_181785 Homo sapiens hypothetical protein LOC283537 (LOC283537), mRNA NM\_181786 Homo saplens GLI-Kruppel family member HKR1 (HKR1), mRNA NM 181787 Homo sapiens hypothetical protein LOC286148 (LOC286148), mRNA NM\_181788 Homo saplens HANP1 (LOC341567), mRNA NM\_181789 Homo sapiens collomin (COLM), mRNA NM\_181790 Homo sapiens G protein-coupled receptor 142 (GPR142), mRNA NM\_181791 Homo sapiens G protein-coupled receptor 141 (GPR141), mRNA NM 181794 Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor beta (PKI NM\_181795 Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor beta (PKI NM\_181797 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, membe NM\_181798 Homo sapiens potassium voltage-gated channel, KQT-like subfamily, member NM\_181799 Homo sapiens ubiquitin-conjugating enzyme E2C (UBE2C), transcript varian NM\_181800 Homo sapiens ubiquitin-conjugating enzyme E2C (UBE2C), transcript variant NM\_181801 Homo sapiens ubiquitin-conjugating enzyme E2C (UBE2C), transcript varian NM\_181802 Homo sapiens ubiquitin-conjugating enzyme E2C (UBE2C), transcript varian: NM\_181803 Homo sapiens ubiquitin-conjugating enzyme E2C (UBE2C), transcript variant NM\_181804 Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor gamma (l NM\_181805 Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor gamma (I NM 181806 Homo sapiens 2-aminoadipic 6-semlaldehyde dehydrogenase (NRPS998), n NM 181807 Homo sapiens doublecortin domain containing 1 (DCDC1), mRNA
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NM\_181808 Homo sapiens polymerase (DNA directed) nu (POLN), mRNA NM\_181809 Homo sapiens bone morphogenetic protein 8a (BMP8A), mRNA

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NM 181827 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181828 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181829 Homo saplens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM_181830 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM_181831 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM_181832 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181833 Homo saplens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181834 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181835 Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2), transcript
NM 181836 Homo sapiens CGI-109 protein (CGI-109), mRNA
NM_181837 Homo sapiens origin recognition complex, subunit 3-like (yeast) (ORC3L), tra
NM 181838 Homo sapiens ubiquitin-conjugating enzyme E2D 2 (UBC4/5 homolog, yeast
NM 181839 Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor alpha (Ph
NM 181840 Homo sapiens TWIK-related spinal cord K+ channel (TRIK), mRNA
NM 181841 Homo sapiens transmembrane channel-like 3 (TMC3), mRNA
NM 181842 Homo sapiens zinc finger and BTB domain containing 12 (ZBTB12), mRNA
NM_181843 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 8 (I
NM 181844 Home sapiens B-cell CLL/lymphoma 6, member B (zinc finger protein) (BCLf
NM 181846 Homo sapiens GLI-Kruppel family member HKR2 (HKR2), mRNA
NM 181847 Homo sapiens amphoterin induced gene 2 (AMIGO2), mRNA
NM_181861 Homo sapiens apoptotic protease activating factor (APAF1), transcript varian
NM_181862 Homo sapiens brain acyl-CoA hydrolase (BACH), transcript variant hBACHa/
NM_181863 Homo sapiens brain acyl-CoA hydrolase (BACH), transcript variant hBACHa/
NM 181864 Homo sapiens brain acyl-CoA hydrolase (BACH), transcript variant hBACHb,
NM 181865 Homo sapiens brain acyl-CoA hydrolase (BACH), transcript variant hBACHc,
NM_181866 Homo sapiens brain acyl-CoA hydrolase (BACH), transcript variant hBACHd,
NM 181868 Home sapiens apoptotic protease activating factor (APAF1), transcript varian
NM_181869 Homo sapiens apoptotic protease activating factor (APAF1), transcript varian
NM_181870 Homo sapiens dishevelled, dsh homolog 1 (Drosophila) (DVL1), transcript va
NM_181871 Homo sapiens pyruvate kinase, liver and RBC (PKLR), nuclear gene encodir
NM 181872 Homo sapiens doublesex and mab-3 related transcription factor 2 (DMRT2).
NM 181873 Homo sapiens cisplatin resistance associated (CRA), mRNA
NM 181874 Homo saplens glutamate receptor, metabotropic 7 (GRM7), transcript variant
NM 181875 Homo sapiens glutamate receptor, metabotropic 7 (GRM7), transcript variant
NM 181876 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B (PF
NM 181877 Homo sapiens zinc finger protein 29 (ZFP29), mRNA
NM_181879 Homo sapiens leukocyte lg-like receptor 9 (LIR9), transcript variant 3, mRNA
NM_181880 Homo sapiens variable charge, Y-linked 1B (VCY1B), mRNA
NM 181882 Homo sapiens perjaxin (PRX), mRNA
NM 181885 Homo sapiens G protein-coupled receptor 100 (GPR100), mRNA
NM 181886 Home sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM 181887 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM_181888 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM_181889 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM 181890 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM 181891 Homo sapiens ubliquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM 181892 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM_181893 Homo sapiens ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast
NM_181894 Homo sapiens glutamate receptor, ionotrophic, AMPA 3 (GRIA3), transcript v
NM 181897 Homo sapiens protein phosphatase 2 (formerly 2A), regulatory subunit B", al
NM 181900 Homo sapiens START domain containing 5 (STARD5), transcript variant 1, n
NM 181985 Homo sapiens leukocyte lg-like receptor 9 (LIR9), transcript variant 2, mRNA
NM 181986 Homo sapiens leukocyte Ig-like receptor 9 (LIR9), transcript variant 4, mRNA
NM 182314 Homo sapiens cytosolic ovarian carcinoma antigen 1 (COVA1), transcript vai
NM 182398 Homo sapiens ribosomal protein S6 kinase, 90kDa, polypeptide 5 (RPS6KA£
NM_182470 Homo sapiens pyruvate kinase, muscle (PKM2), transcript variant 2, mRNA
NM_182471 Homo sapiens pyruvate kinase, muscle (PKM2), transcript variant 3, mRNA
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NM 182472 Homo sapiens EphA5 (EPHA5), transcript variant 2, mRNA NM 182476 Homo sapiens coenzyme Q6 homolog (yeast) (COQ6), transcript variant 1, n NM 182477 Homo sapiens gametogenetin (GGN), transcript variant 2, mRNA NM 182480 Homo sapiens coenzyme Q6 homolog (yeast) (COQ6), transcript variant 2, n NM 182481 Homo sapiens B melanoma antigen family, member 3 (BAGE3), mRNA NM\_182482 Homo sapiens B melanoma antigen family, member 2 (BAGE2), mRNA NM\_182483 Homo sapiens NSFL1 (p97) cofactor (p47) (NSFL1C), transcript variant 3, m NM\_182484 Homo sapiens B melanoma antigen family, member 5 (BAGE5), mRNA NM 182485 Homo sapiens cytoplasmic polyadenylation element binding protein 2 (CPEB NM\_182486 Homo sapiens C1q and tumor necrosis factor related protein 6 (C1QTNF6), t NM 182487 Homo sapiens olfactomedin-like 2A (OLFML2A), mRNA NM\_182488 Homo sapiens ubiquitin specific protease 12 (USP12), mRNA NM\_182489 Homo sapiens STRA8 (LOC346673), mRNA NM\_182490 Homo sapiens zinc finger protein 227 (ZNF227), mRNA NM 182491 Homo sapiens hypothetical protein LOC90637 (LOC90637), mRNA NM 182492 Homo sapiens hypothetical protein DKFZp434O0213 (DKFZp434O0213), mF NM 182493 Homo sapiens myosin light chain kinase (MLCK) (LOC91807), mRNA NM\_182494 Homo sapiens family with sequence similarity 26, member A (FAM26A), mRI NM\_182495 Homo sapiens hypothetical protein FLJ25224 (FLJ25224), mRNA NM 182496 Homo saplens hypothetical protein FLJ40089 (FLJ40089), mRNA NM 182497 Homo sapiens type I hair keratin KA36 (KA36), mRNA NM\_182498 Homo sapiens hypothetical protein MGC51082 (MGC51082), mRNA NM\_182499 Homo sapiens hypothetical protein DKFZp434M202 (DKFZp434M202), mRN NM\_182500 Homo saplens hypothetical protein FLJ25143 (FLJ25143), mRNA NM\_182501 Homo sapiens hypothetical protein MGC61716 (MGC61716), mRNA NM 182502 Homo sapiens hypothetical protein DKFZp686L1818 (DKFZp686L1818), mR NM 182503 Homo saplens deaminase domain containing 1 (DEADC1), mRNA NM\_182504 Homo saplens Williams-Beuren syndrome critical region 28 (WBSCR28), mF NM\_182505 Homo sapiens chromosome 9 open reading frame 85 (C9orf85), transcript ve NM\_182506 Homo sapiens hypothetical protein FLJ32965 (FLJ32965), mRNA NM\_182507 Homo sapiens hypothetical protein LOC144501 (LOC144501), mRNA NM 182508 Homo saplens hypothetical protein FLJ40919 (FLJ40919), mRNA NM 182509 Homo sapiens thrombospondin, type I, domain containing 3 (THSD3), transc NM 182510 Homo sapiens hypothetical protein FLJ32252 (FLJ32252), mRNA NM 182511 Homo sapiens cerebellin 2 precursor (CBLN2), mRNA NM 182513 Homo sapiens kinetochore protein Spc24 (Spc24), mRNA NM\_182516 Homo sapiens hypothetical protein FLJ32011 (FLJ32011), mRNA NM\_182517 Homo sapiens hypothetical protein MGC52423 (MGC52423), mRNA NM\_182518 Homo sapiens hypothetical protein LOC149469 (LOC149469), mRNA NM\_182519 Homo sapiens chromosome 20 open reading frame 186 (C20orf186), mRNA NM\_182520 Homo sapiens chromosome 22 open reading frame 15 (C22orf15), mRNA NM\_182521 Homo sapiens zinc finger, SWIM domain containing 2 (ZSWIM2), mRNA NM\_182522 Homo sapiens TAFA4 protein (TAFA4), mRNA NM\_182523 Homo sapiens hypothetical protein MGC61571 (MGC61571), mRNA NM 182524 Homo sapiens zinc finger protein 595 (ZNF595), mRNA NM 182525 Homo sapiens hypothetical protein FLJ32770 (FLJ32770), mRNA NM 182526 Homo sapiens hypothetical protein FLJ33387 (FLJ33387), mRNA NM\_182527 Homo sapiens calcium binding protein 7 (CABP7), mRNA NM\_182528 Homo saplens complement component 1, q subcomponent-like 2 (C1QL2), r NM\_182529 Homo sapiens THAP domain containing 5 (THAP5), mRNA NM\_182530 Homo sapiens hypothetical protein FLJ25056 (FLJ25056), mRNA NM\_182531 Homo sapiens hypothetical protein FLJ31875 (FLJ31875), mRNA NM\_182532 Homo sapiens hypothetical protein LOC199964 (LOC199964), mRNA NM\_182533 Homo sapiens hypothetical protein FLJ31031 (FLJ31031), mRNA NM 182534 Homo sapiens hypothetical protein FLJ23703 (FLJ23703), mRNA NM 182535 Homo sapiens hypothetical protein LOC200261 (LOC200261), mRNA

NM 182536 Homo sapiens down-regulated in gastric cancer GDDR (GDDR), mRNA

NM\_182537 Homo sapiens 5-hydroxytryptamine (serotonin) receptor 3 family member D ( NM 182538 Homo sapiens hypothetical protein MGC29671 (MGC29671), mRNA NM 182539 Homo sapiens hypothetical protein MGC33600 (MGC33600), mRNA NM 182541 Homo sapiens transmembrane protein 31 (TMEM31), mRNA NM 182543 Homo sapiens nucleolar protein (NOL1/NOP2/sun) and PUA domains 1 (NOI NM 182546 Homo sapiens hypothetical protein MGC33530 (MGC33530), mRNA NM 182547 Homo sapiens putative NFkB activating protein HNLF (HNLF), mRNA NM 182548 Homo sapiens hypothetical protein MGC33835 (MGC33835), mRNA NM 182549 Homo sapiens major histocompatibility complex, class II, DQ beta 2 (HLA-DC NM\_182551 Homo sapiens acyl-CoA:lysocardiolipin acyltransferase 1 (ALCAT1), transcrip NM 182552 Homo sapiens hypothetical protein MGC43690 (MGC43690), mRNA NM 182553 Homo sapiens hypothetical protein MGC50896 (MGC50896), mRNA NM 182554 Homo sapiens chromosome 10 open reading frame 53 (C10orf53), mRNA NM 182556 Homo sapiens hypothetical protein LOC283130 (LOC283130), mRNA NM 182557 Homo sapiens B-cell CLL/lymphoma 9-like (BCL9L), mRNA NM 182558 Homo sapiens hypothetical protein FLJ33810 (FLJ33810), mRNA NM 182559 Homo sapiens hypothetical protein MGC57341 (MGC57341), mRNA NM 182560 Homo sapiens hypothetical protein FLJ25773 (FLJ25773), mRNA NM 182561 Homo sapiens hypothetical protein FLJ36144 (FLJ36144), mRNA NM 182562 Homo sapiens hypothetical protein FLJ39743 (FLJ39743), mRNA NM\_182563 Homo saplens hypothetical protein MGC21830 (MGC21830), mRNA NM\_182564 Homo sapiens hypothetical protein FLJ40319 (FLJ40319), mRNA NM\_182565 Homo saplens hypothetical protein MGC29814 (MGC29814), mRNA NM\_182566 Homo sapiens secretory protein LOC284013 (LOC284013), mRNA NM\_182568 Homo sapiens hypothetical protein FLJ36492 (FLJ36492), mRNA NM\_182569 Homo saplens hypothetical protein FLJ37451 (FLJ37451), mRNA NM 182570 Homo sapiens hypothetical protein FLJ25715 (FLJ25715), mRNA NM 182572 Homo sapiens zinc finger and SCAN domain containing 1 (ZSCAN1), mRNA NM 182573 Homo sapiens hypothetical protein FLJ30469 (FLJ30469), mRNA NM\_182574 Homo sapiens hypothetical protein FLJ36070 (FLJ36070), mRNA NM 182575 Homo sapiens hypothetical protein MGC34799 (MGC34799), mRNA NM 182577 Homo saplens chromosome 19 open reading frame 19 (C19orf19), mRNA NM\_182578 Homo sapiens hypothetical protein FLJ37964 (FLJ37964), mRNA NM\_182579 Homo saplens hypothetical protein FLJ40343 (FLJ40343), mRNA NM 182580 Homo sapiens cytochrome b-561 domain containing 1 (CYB561D1), mRNA NM 182581 Homo sapiens hypothetical protein LOC284680 (LOC284680), mRNA NM 182583 Homo sapiens hypothetical protein FLJ38374 (FLJ38374), mRNA NM 182584 Homo saplens hypothetical protein FLJ33706 (FLJ33706), mRNA NM\_182585 Homo sapiens hypothetical protein DKFZp451M2119 (DKFZp451M2119), ml NM 182586 Homo sapiens hypothetical protein FLJ33534 (FLJ33534), mRNA NM 182587 Homo sapiens chromosome 2 open reading frame 21 (C2orf21), mRNA NM 182589 Homo sapiens 5-hydroxytryptamine (serotonin) receptor 3, family member E NM 182590 Homo sapiens hypothetical protein FLJ33651 (FLJ33651), mRNA NM 182591 Homo sapiens hypothetical protein FLJ37673 (FLJ37673), mRNA NM 182592 Homo sapiens hypothetical protein FLJ39576 (FLJ39576), mRNA NM\_182594 Homo sapiens zinc finger protein 454 (ZNF454), mRNA NM\_182595 Homo sapiens hypothetical protein DKFZp564N2472 (DKFZp564N2472), mF NM 182596 Homo sapiens hypothetical protein FLJ25037 (FLJ25037), mRNA NM 182597 Homo sapiens hypothetical protein FLJ39575 (FLJ39575), mRNA NM 182598 Homo sapiens hypothetical protein FLJ36980 (FLJ36980), mRNA NM 182600 Homo sapiens hypothetical protein LOC286359 (LOC286359), mRNA NM\_182603 Homo sapiens hypothetical protein FLJ37874 (FLJ37874), mRNA NM 182605 Homo sapiens hypothetical protein FLJ40448 (FLJ40448), mRNA NM 182606 Homo sapiens hypothetical protein LOC339967 (LOC339967), mRNA NM\_182607 Homo sapiens hypothetical protein MGC44287 (MGC44287), mRNA NM 182608 Homo sapiens hypothetical protein DKFZp686O1689 (DKFZp686O1689), mf NM 182609 Homo sapiens hypothetical protein MGC48625 (MGC48625), mRNA

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NM\_182610 Homo saplens sterile alpha motif domain containing 7 (SAMD7), mRNA NM 182611 Homo sapiens G protein-coupled receptor 144 (GPR144), mRNA NM 182612 Homo sapiens hypothetical protein FLJ34283 (FLJ34283), mRNA NM 182613 Homo sapiens hypothetical protein FLJ33915 (FLJ33915), mRNA NM\_182614 Homo sapiens hypothetical protein MGC20579 (MGC20579), mRNA NM\_182615 Homo sapiens hypothetical protein MGC40069 (MGC40069), mRNA NM\_182616 Homo sapiens hypothetical protein MGC61550 (MGC81550), mRNA NM\_182617 Homo sapiens xenobiotic/medium-chain fatty acid:CoA ligase (HXMA), nucle NM\_182619 Homo sapiens secretory protein LOC348174 (LOC348174), mRNA NM\_182620 Homo sapiens family with sequence similarity 33, member A (FAM33A), mRi NM\_182621 Homo sapiens hypothetical protein MGC52498 (MGC52498), mRNA NM\_182623 Homo sapiens hypothetical protein FLJ36766 (FLJ36766), mRNA NM 182625 Homo sapiens hypothetical protein FLJ40869 (FLJ40869), mRNA NM\_182626 Homo sapiens hypothetical protein FLJ25102 (FLJ25102), mRNA NM\_182627 Homo sapiens hypothetical protein MGC64882 (MGC64882), mRNA NM\_182628 Homo sapiens hypothetical protein FLJ40083 (FLJ40083), mRNA NM\_182631 Homo saplens hypothetical protein LOC348840 (LOC348840), mRNA NM\_182632 Homo saplens solute carrier family 6 (neurotransmitter transporter), member NM\_182633 Homo sapiens hypothetical protein FLJ39963 (FLJ39963), mRNA NM\_182634 Homo sapiens hypothetical protein FLJ36166 (FLJ36166), mRNA NM\_182635 Homo sapiens hypothetical protein LOC349236 (LOC349236), mRNA NM\_182637 Homo sapiens Hermansky-Pudlak syndrome 1 (HPS1), transcript variant 2, r NM\_182638 Homo sapiens Hermansky-Pudlak syndrome 1 (HPS1), transcript variant 4, r NM\_182639 Homo sapiens Hermansky-Pudlak syndrome 1 (HPS1), transcript variant 3, r NM\_182640 Homo sapiens mitochondrial ribosomal protein S9 (MRPS9), nuclear gene er NM\_182641 Homo saplens fetal Alzheimer antigen (FALZ), transcript variant 1, mRNA NM 182642 Homo sapiens CTD (carboxy-terminal domain, RNA polymerase II, polypeptii NM 182643 Homo sapiens deleted in liver cancer 1 (DLC1), transcript variant 1, mRNA NM\_182644 Homo sapiens EphA3 (EPHA3), transcript variant 2, mRNA NM 182645 Homo sapiens vestigial like 2 (Drosophila) (VGLL2), transcript variant 1, mRt NM\_182646 Homo sapiens cytoplasmic polyadenylation element binding protein 2 (CPEB NM\_182647 Homo sapiens oplate receptor-like 1 (OPRL1), transcript variant 1, mRNA NM\_182648 Homo sapiens bromodomain adjacent to zinc finger domain, 1A (BAZ1A), tra NM\_182649 Homo saplens proliferating cell nuclear antigen (PCNA), transcript variant 2, NM\_182658 Homo saplens chromosome 20 open reading frame 185 (C20orf185), mRNA NM\_182659 Homo saplens ubiquitously transcribed tetratricopeptide repeat gene, Y-linke NM\_182660 Homo sapiens ublquitously transcribed tetratricopeptide repeat gene, Y-linke NM\_182661 Homo sapiens ceramide kinase (CERK), transcript variant 2, mRNA NM 182662 Homo sapiens aminoadipate aminotransferase (AADAT), transcript variant 2. NM\_182663 Homo sapiens Ras association (RaiGDS/AF-6) domain family 5 (RASSF5), ti NM\_182664 Homo saplens Ras association (RalGDS/AF-6) domain family 5 (RASSF5), to NM\_182665 Homo sapiens Ras association (RaIGDS/AF-6) domain family 5 (RASSF5), to NM\_182666 Homo sapiens ubiquitin-conjugating enzyme E2E 1 (UBC4/5 homolog, yeast NM\_182676 Homo sapiens phospholipid transfer protein (PLTP), transcript variant 2, mRI NM\_182678 Homo sapiens ubiquitin-conjugating enzyme E2E 3 (UBC4/5 homolog, yeast NM\_182679 Homo sapiens hypothetical protein FLJ20249 (FLJ20249), transcript variant: NM\_182680 Homo sapiens amelogenin (amelogenesis imperfecta 1, X-linked) (AMELX), NM 182681 Homo sapiens amelogenin (amelogenesis imperfecta 1, X-linked) (AMELX). NM\_182682 Homo sapiens ubiquitin-conjugating enzyme E2G 1 (UBC7 homolog, C, eleg NM\_182683 Homo saplens uroplakin 3B (UPK3B), transcript variant 3, mRNA NM\_182684 Homo sapiens uroplakin 3B (UPK3B), transcript variant 2, mRNA NM\_182685 Homo sapiens ephrin-A1 (EFNA1), transcript variant 2, mRNA NM 182686 Homo sapiens polycystic kidney disease 1-like (PKD1-like), transcript variant NM\_182687 Homo sapiens membrane-associated tyrosine- and threonine-specific cdc2-in NM\_182688 Homo sapiens ubiquitin-conjugating enzyme E2G 2 (UBC7 homolog, yeast) ( NM\_182689 Homo sapiens ephrin-A4 (EFNA4), transcript variant 2, mRNA NM\_182690 Homo sapiens ephrin-A4 (EFNA4), transcript variant 3, mRNA

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NM\_182691 Homo sapiens SFRS protein kinase 2 (SRPK2), transcript variant 2, mRNA NM\_182692 Homo sapiens SFRS protein kinase 2 (SRPK2), transcript variant 1, mRNA NM\_182697 Homo sapiens ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast) (U NM\_182699 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 53 (DDX53), mRNA NM\_182700 Homo sapiens Sp8 transcription factor (SP8), transcript variant 1, mRNA NM 182701 Homo sapiens glutathione peroxidase 6 (olfactory) (GPX6), mRNA NM 182702 Homo sapiens testis serine protease 2 (TESSP2), mRNA NM\_182703 Homo sapiens hypothetical protein LOC348094 (LOC348094), mRNA NM\_182704 Homo sapiens selenoprotein V (SELV), mRNA NM\_182705 Homo sapiens hypothetical protein MGC45871 (MGC45871), mRNA NM 182706 Homo sapiens scribbled homolog (Drosophila) (SCRIB), transcript variant 1, NM\_182709 Homo sapiens HIV-1 Tat interacting protein, 60kDa (HTATIP), transcript variations and transcript variations are supported by the control of the co NM\_182710 Homo sapiens HIV-1 Tat interacting protein, 60kDa (HTATIP), transcript varia NM\_182712 Homo sapiens eukaryotic translation initiation factor 3, subunit 9 eta, 116kDa NM\_182715 Homo sapiens synaptophysin-like protein (SYPL), transcript variant 2, mRNA NM\_182717 Homo saplens cAMP responsive element modulator (CREM), transcript varia NM\_182718 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182719 Homo saplens cAMP responsive element modulator (CREM), transcript varia NM\_182720 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM 182721 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM 182722 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM 182723 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182724 Homo saplens cAMP responsive element modulator (CREM), transcript varia NM\_182725 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182728 Homo saplens solute carrier family 7 (cationic amino acid transporter, y+ sys NM\_182729 Homo sapiens thioredoxin reductase 1 (TXNRD1), transcript variant 5, mRN/ NM\_182734 Homo saplens phospholipase C, beta 1 (phospholnositide-specific) (PLCB1), NM\_182739 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 6, 17 NM\_182740 Homo sapiens polycystic kidney disease 1-like 2 (PKD1L2), transcript variant NM\_182741 Homo saplens mucin 1, transmembrane (MUC1), mRNA NM\_182742 Homo saplens thioredoxin reductase 1 (TXNRD1), transcript variant 2, mRN/ NM\_182743 Homo sapiens thioredoxin reductase 1 (TXNRD1), transcript variant 4, mRN/ NM 182744 Homo sapiens neuroblastoma, suppression of tumorigenicity 1 (NBL1), trans NM\_182746 Homo saplens MCM4 minIchromosome maIntenance deficient 4 (S. cerevisia NM\_182749 Homo sapiens chromosome 21 open reading frame 127 (C21orf127), transcr NM\_182751 Homo sapiens MCM10 minichromosome maintenance deficient 10 (S. cerevi NM\_182752 Homo sapiens hypothetical protein LOC127262 (LOC127262), mRNA NM\_182755 Homo sapiens hypothetical protein LOC220929 (LOC220929), mRNA NM\_182756 Homo saplens speedy homolog 1 (Drosophila) (SPDY1), mRNA NM\_182757 Homo saplens IBR domain containing 2 (IBRDC2), mRNA NM\_182758 Homo sapiens hypothetical protein FLJ38736 (FLJ38736), mRNA NM\_182759 Homo sapiens TAFA3 protein (TAFA3), mRNA NM\_182760 Homo sapiens sulfatase modifying factor 1 (SUMF1), mRNA NM\_182761 Homo sapiens hypothetical protein LOC340069 (LOC340069), mRNA NM\_182762 Homo sapiens putative binding protein 7a5 (7A5), mRNA NM\_182763 Homo sapiens myeloid cell leukemla sequence 1 (BCL2-related) (MCL1), tra NM\_182764 Homo sapiens engulfment and cell motility 2 (ced-12 homolog, C. elegans) (I NM\_182765 Homo sapiens HECT domain containing 2 (HECTD2), transcript variant 1, ml NM\_182766 Homo sapiens hypothetical protein FLJ32940 (DKFZp696H1423), transcript NM\_182767 Homo sapiens solute carrier family 6 (neurotransmitter transporter), member 4 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM 182770 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182771 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182772 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182774 Homo sapiens hypothetical protein LOC259173 (FLJ36525), transcript variar NM\_182775 Homo sapiens hypothetical protein LOC259173 (FLJ36525), transcript variar NM\_182776 Homo sapiens MCM7 minichromosome maintenance deficient 7 (S. cerevisia

NM\_182777 Homo sapiens ribosomal protein S3A (RPS3A), mRNA NM\_182779 Homo sapiens dishevelled, dsh homolog 1 (Drosophila) (DVL1), mRNA NM 182789 Homo sapiens poly(A) binding protein interacting protein 1 (PAIP1), transcrip NM\_182790 Homo sapiens pre-B-cell colony enhancing factor 1 (PBEF1), transcript varia NM 182791 Homo sapiens hypothetical protein FLJ32855 (FLJ32855), mRNA NM\_182792 Homo sapiens thymosin-like 1 (TMSL1), mRNA NM 182793 Homo sapiens thymosin-like 2 (TMSL2), mRNA NM 182794 Homo sapiens thymosin-like 4 (TMSL4), mRNA NM\_182795 Homo sapiens nucleophosmin/nucleoplasmin, 2 (NPM2), mRNA NM\_182796 Homo sapiens methionine adenosyltransferase II, beta (MAT2B), transcript v NM 182797 Homo sapiens phospholipase C, beta 4 (PLCB4), transcript variant 2, mRNA NM 182798 Homo sapiens hypothetical protein FLJ39155 (FLJ39155), transcript variant ; NM\_182799 Homo sapiens hypothetical protein FLJ39155 (FLJ39155), transcript variant: NM 182800 Homo sapiens arsenate resistance protein ARS2 (ARS2), transcript variant 2 NM\_182801 Homo sapiens hypothetical protein FLJ39155 (FLJ39155), transcript variant NM\_182802 Homo sapiens MCM8 minichromosome maintenance deficient 8 (S. cerevisia NM\_182804 Homo sapiens apolipoprotein B48 receptor (APOB48R), mRNA NM 182810 Homo sapiens activating transcription factor 4 (tax-responsive enhancer elen-NM\_182811 Homo sapiens phospholipase C, gamma 1 (PLCG1), transcript variant 2, mR NM\_182812 Homo sapiens splicing factor 4 (SF4), transcript variant c, mRNA NM\_182826 Homo sapiens scavenger receptor class A, member 3 (SCARA3), transcript v NM\_182827 Homo sapiens FK506 binding protein 9-like (FKBP9L), mRNA NM\_182828 Homo sapiens growth differentiation factor 7 (GDF7), mRNA NM\_182829 Homo sapiens hypothetical protein LOC158160 (LOC158160), mRNA NM\_182830 Homo saplens MAM domain containing 1 (MAMDC1), mRNA NM 182831 Homo sapiens TNT protein (TNT), mRNA NM 182832 Homo sapiens placenta-specific 4 (PLAC4), mRNA NM\_182833 Homo sapiens GDPD domain containing protein (LOC220032), mRNA NM\_182835 Homo sapiens sec1 family domain containing 1 (SCFD1), transcript variant 2 NM\_182836 Homo sapiens Rab geranylgeranyltransferase, alpha subunit (RABGGTA), tr. NM\_182838 Homo sapiens solute carrier family 35, member E2 (SLC35E2), mRNA NM\_182847 Homo saplens amilioride-sensitive cation channel 4, pituitary (ACCN4), transc NM\_182848 Homo sapiens claudin 10 (CLDN10), transcript variant 1, mRNA NM\_182849 Homo sapiens cyclin B1 interacting protein 1 (CCNB1IP1), transcript variant: NM\_182850 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_182851 Homo saplens cyclin B1 interacting protein 1 (CCNB1IP1), transcript variant

NM\_182850 Homo sapiens cAMP responsive element modulator (CREM), transcript variar. NM\_182851 Homo sapiens cyclin B1 interacting protein 1 (CCNBI1P1), transcript variart. NM\_182852 Homo sapiens cyclin B1 interacting protein 1 (CCNBI1P1), transcript variart. NM\_182853 Homo sapiens cAMP responsive element modulator (CREM), transcript variart NM\_182854 Homo sapiens selectin ligand interactor cytoplasmic-1 (SLC1), mRNA NM\_18284 Homo sapiens selectin ligand interactor cytoplasmic-1 (SLC1), mRNA NM\_18284 Homo sapiens selectin ligand interactor cytoplasmic-1 (SLC1), mRNA

NM\_182895 Homo saplens scavenger receptor dass F, member 2 (SCARF2), transcript. MM\_182896 Homo saplens hypothetical protein DKF2p761H079 (DKF2p761H079), trans-NM\_182898 Homo saplens cAMP responsive element binding protein 5 (CREB5), mRNA NM\_182899 Homo saplens cAMP responsive element binding protein 5 (CREB5), mRNA NM\_182901 Homo saplens thromosome 11 open reading farent 7 (C11or1f7), transcript

NM\_182902 Homo saplens kinesin family member 9 (KIF9), mRNA

NM\_182903 Homo sapiens kinesin family member 9 (KIF9), mRNA
NM\_182904 Homo sapiens procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-l

NM\_182905 Homo sapiens CXYorf1-related protein (DKFZp434K1323), mRNA NM\_182906 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain

NM\_182907 Homo sapiens PR domain containing 1, with ZNF domain (PRDM1), transcript NM\_182908 Homo sapiens dehydrogenase/reductase (SDR family) member 2 (DHRS2),

NM\_182909 Homo sapiens downregulated in ovarian cancer 1 (DOC1), transcript variant NM\_182910 Homo sapiens spectrin repeat containing, nuclear envelope 2 (SYNE2), trans

NM\_182911 Homo sapiens testis specific, 10 (TSGA10), mRNA

NM\_182912 Homo sapiens spectrin repeat containing, nuclear envelope 2 (SYNE2), trans NM\_182913 Homo sapiens spectrin repeat containing, nuclear envelope 2 (SYNE2), trans

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NM\_182915 Homo sapiens dudulin 2 (TSAP6), mRNA NM\_182916 Homo sapiens tRNA nucleotidyl transferase, CCA-adding, 1 (TRNT1), mRNA NM 182917 Homo sapiens eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1), tr NM 182918 Homo sapiens v-ets erythroblastosis virus E26 oncogene like (avian) (ERG), NM 182919 Homo sapiens TIR domain containing adaptor inducing interferon-beta (TRIF NM 182920 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 182921 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 182922 Homo sapiens hypothetical protein FLJ20718 (FLJ20718), mRNA NM 182923 Homo sapiens kinesin 2 60/70kDa (KNS2), mRNA NM 182924 Homo sapiens MICAL-like 2 (FLJ23471), transcript variant 1, mRNA NM 182925 Homo sapiens fms-related tyrosine kinase 4 (FLT4), transcript variant 1, mRI NM\_182926 Homo sapiens kinectin 1 (kinesin receptor) (KTN1), mRNA NM\_182931 Homo sapiens myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homo NM\_182932 Homo sapiens solute carrier family 8 (sodium-calcium exchanger), member 3 NM\_182933 Homo sapiens solute carrier family 8 (sodium-calcium exchanger), member \$ NM 182934 Homo saplens myelin-associated oligodendrocyte basic protein (MOBP), mR NM 182935 Homo sapiens myelin-associated oligodendrocyte basic protein (MOBP), mR NM 182936 Homo sapiens solute carrier family 8 (sodium-calcium exchanger), member 5 NM 182943 Homo sapiens procollagen-lysine, 2-oxoglutarate 5-dloxygenase (lysine hydr-NM 182944 Homo sapiens ninein (GSK3B interacting protein) (NIN), transcript variant 1, NM 182945 Homo sapiens ninein (GSK3B interacting protein) (NIN), transcript variant 3, NM\_182946 Homo sapiens ninein (GSK3B interacting protein) (NIN), transcript variant 5, NM 182947 Homo sapiens RAC/CDC42 exchange factor (GEFT), transcript variant 1, mF NM\_182948 Homo sapiens protein kinase, cAMP-dependent, catalytic, beta (PRKACB), ti NM\_182960 Homo sapiens hypothetical protein MGC21644 (MGC21644), transcript varia NM\_182961 Homo saplens spectrin repeat containing, nuclear envelope 1 (SYNE1), trans NM 182962 Homo sapiens baculoviral IAP repeat-containing 3 (BIRC3), transcript variant NM 182964 Homo sapiens neuron navigator 2 (NAV2), transcript variant 1, mRNA NM 182965 Homo sapiens sphingosine kinase 1 (SPHK1), mRNA NM 182966 Homo sapiens neural precursor cell expressed, developmentally down-regula NM 182970 Homo sapiens regulating synaptic membrane exocytosis 4 (RIMS4), mRNA NM 182971 Homo sapiens cytochrome c oxidase subunit 8C (COX8C), mRNA

NM\_182914 Homo sapiens spectrin repeat containing, nuclear envelope 2 (SYNE2), trans

NM\_182972 Homo sapiens interferon regulatory factor 2 binding protein 2 (IRF2BP2), mR NM\_182973 Homo sapiens transmembrane serine protease 9 (TMPRSS9), mRNA

NM\_182974 Homo sapiens galactosyltransferase family 6 domain containing 1 (GLTDC1)
NM\_182975 Homo sapiens hypothetical protein FLJ20403 (FLJ20403), transcript variant 1
NM\_182976 Homo sapiens hypothetical protein FLJ20403 (FLJ20403), transcript variant 1
NM\_182977 Homo sapiens nicotinamide nucleotide transhydrogenase (NNT), mRNA

NM\_182977 Homo sapiens nicotinamide indeedtide training degenase (NRT), marking NM\_182978 Homo sapiens guanine nucleotide binding protein (G protein), alpha activatin

NM\_182980 Homo saplens pregnancy-induced growth inhibitor (OKL38), mRNA

NM\_182981 Homo sapiens pregnancy-induced growth inhibitor (OKL38), mRNA

NIM\_182982 Homo sapiens G protein-coupled receptor kinase 4 (GRK4), transcript variant NIM\_182993 Homo sapiens hepsiln (transmembrane protease, serine 1) (HPN), transcript MI\_182994 Homo sapiens Hpall timy fragments locus 9 C (HTPSC), transcript variant 1, r

MM 18285 Homo sapiens ring finger protein 36 (RNF36), transcript variant a, mRNA NM 183001 Homo sapiens SHC (Src homology 2 domain containing) transforming protein MM 1830002 Homo sapiens solute carrier family 8 (sodium-calcium exchanger), member 3

NM\_183003 Homo sapiens cytochrome c oxidase subunit VIIa potypeptide 3 (liver) (COX: NM\_183004 Homo sapiens eukaryolic translation factor 5 (EIF5), transcript varia NM\_183005 Homo sapiens ribonuclease P/MRP 38kDa subunit (RPP38), transcript varia

NM\_18300b Homo sapiens monutolease Primer 36ND sabdaint (4F 30), bankship water 1800 Homo sapiens discs, large (Drosophia) homolog-associated protein 4 (DLG/NM\_18300b Homo sapiens socius (SOC), mRNA

NM\_183009 Homo sapiens DKFZP434I116 protein (DKFZP434I116), transcript variant 2, NM\_183010 Homo sapiens trinucleotide repeat containing 5 (TNRC5), mRNA

NM\_183010 Homo sapiens tranucleotide repeat containing 3 (INRCS), INRCS NM\_183011 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_183012 Homo sapiens cAMP responsive element modulator (CREM), transcript varia

NM 183013 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM 183040 Homo sapiens dystrobrevin binding protein 1 (DTNBP1), transcript variant 2, NM\_183041 Homo sapiens dystrobrevin binding protein 1 (DTNBP1), transcript variant 3, NM\_183043 Homo sapiens ring finger protein (C3H2C3 type) 6 (RNF6), transcript variant NM\_183044 Homo sapiens ring finger protein (C3H2C3 type) 6 (RNF6), transcript variant NM\_183045 Homo sapiens ring finger protein (C3H2C3 type) 6 (RNF6), transcript variant NM 183047 Homo sapiens protein kinase C binding protein 1 (PRKCBP1), transcript varis NM\_183048 Homo sapiens protein kinase C binding protein 1 (PRKCBP1), transcript varia NM 183049 Homo sapiens thymosin-like 3 (TMSL3), mRNA NM 183050 Homo sapiens branched chain keto acid dehydrogenase E1, beta polypeptid NM 183057 Homo sapiens vacuolar protein sorting 28 (yeast) (VPS28), transcript variant NM 183058 Homo sapiens lysozyme-like 2 (LYZL2), mRNA NM\_183059 Homo sapiens chromosome 1 open reading frame 36 (C1orf36), mRNA NM\_183060 Homo sapiens cAMP responsive element modulator (CREM), transcript varia NM\_183062 Homo sapiens marapsin 2 (MPN2), mRNA NM\_183063 Homo sapiens ring finger protein 7 (RNF7), transcript variant 2, mRNA NM 183065 Homo sapiens hypothetical protein MGC10744 (MGC10744), transcript varia NM\_183075 Homo sapiens cytochrome P450, family 2, subfamily U, polypeptide 1 (CYP2 NM 183078 Home sapiens ring finger protein (C3HC4 type) 8 (RNF8), transcript variant 2 NM\_183079 Homo sapiens prion protein (p27-30) (Creutzfeld-Jakob disease, Gerstmann-NM\_183227 Homo saplens RAB23, member RAS oncogene family (RAB23), transcript ve NM\_183228 Homo sapiens zinc finger protein, subfamily 1A, 3 (Aiolos) (ZNFN1A3), trans-NM\_183229 Homo sapiens zinc finger protein, subfamily 1A, 3 (Aiolos) (ZNFN1A3), trans-NM\_183230 Homo saplens zinc finger protein, subfamily 1A, 3 (Alolos) (ZNFN1A3), trans-NM\_183231 Homo saplens zinc finger protein, subfamily 1A, 3 (Alolos) (ZNFN1A3), trans-NM\_183232 Homo saplens zinc finger protein, subfamily 1A, 3 (Aiolos) (ZNFN1A3), trans-NM\_183233 Homo sapiens solute carrier family 22 (organic cation transporter), member 1 NM 183234 Homo sapiens RAB27A, member RAS oncogene family (RAB27A), transcript NM\_183235 Homo sapiens RAB27A, member RAS oncogene family (RAB27A), transcript NM\_183236 Homo saplens RAB27A, member RAS oncogene family (RAB27A), transcript NM\_183237 Homo sapiens ring finger protein 7 (RNF7), transcript variant 3, mRNA NM\_183238 Homo sapiens zinc finger protein 605 (ZNF605), mRNA NM\_183239 Homo sapiens glutathione S-transferase omega 2 (GSTO2), mRNA NM\_183240 Homo sapiens voltage-dependent calcium channel gamma subunit-like prote NM\_183241 Homo saplens hypothetical protein LOC286257 (LOC286257), mRNA NM\_183242 Homo sapiens BTB (POZ) domain containing 8 (BTBD8), mRNA NM\_183243 Homo sapiens IMP (Inosine monophosphate) dehydrogenase 1 (IMPDH1), tr NM 183244 Homo sapiens phosphatase and actin regulator 3 (PHACTR3), transcript vari NM\_183245 Homo sapiens inversin (INVS), transcript variant 2, mRNA NM 183246 Homo saplens phosphatase and actin regulator 3 (PHACTR3), transcript vari NM 183247 Homo saplens transmembrane protease, senne 4 (TMPRSS4), transcript var NM\_183323 Homo saplens poly(A) binding protein interacting protein 1 (PAIP1), transcrip NM 183337 Homo sapiens regulator of G-protein signalling 11 (RGS11), transcript varian NM 183352 Homo saplens SEC13-like 1 (S. cerevisiae) (SEC13L1), transcript variant 2, i NM\_183353 Homo sapiens ring finger protein 12 (RNF12), transcript variant 2, mRNA NM 183356 Homo sapiens asparagine synthetase (ASNS), transcript variant 3, mRNA NM\_183357 Homo sapiens adenylate cyclase 5 (ADCY5), mRNA NM\_183359 Homo sapiens bromodomain containing 8 (BRD8), transcript variant 3, mRN/ NM\_183360 Homo sapiens dystrobrevin, beta (DTNB), transcript variant 4, mRNA NM\_183361 Homo sapiens dystrobrevin, beta (DTNB), transcript variant 5, mRNA NM 183372 Homo sapiens hypothetical protein LOC200030 (LOC200030), mRNA NM 183373 Homo sapiens chromosome 6 open reading frame 145 (C6orf145), mRNA NM 183374 Homo sapiens cytochrome P450, family 26, subfamily C, polypeptide 1 (CYP NM 183375 Homo sapiens epidermis-specific serine protease-like protein (ESSPL), mRN NM 183376 Homo sapiens arrestin domain containing 4 (ARRDC4), mRNA NM\_183377 Homo sapiens amiloride-sensitive cation channel 1, neuronal (degenerin) (Al NM\_183378 Homo sapiens ovochymase 1 (OVCH1), mRNA

NM\_183379 Homo sapiens testis serine protease 1 (TESSP1), mRNA NM\_183380 Homo sapiens dystonin (DST), transcript variant 1, mRNA NM\_183381 Homo sapiens ring finger protein 13 (RNF13), transcript variant 4, mRNA NM\_183382 Homo sapiens ring finger protein 13 (RNF13), transcript variant 2, mRNA NM\_183383 Homo sapiens ring finger protein 13 (RNF13), transcript variant 3, mRNA NM 183384 Homo saplens ring finger protein 13 (RNF13), transcript variant 5, mRNA NM\_183385 Homo sapiens peroxisomal acyl-CoA thioesterase (PTE1), transcript variant: NM 183386 Homo sapiens peroxisomal acyl-CoA thioesterase (PTE1), transcript variant: NM 183387 Homo sapiens echinoderm microtubule associated protein like 5 (EML5), mR NM\_183393 Homo sapiens Ca2+-dependent secretion activator (CADPS), transcript varia NM\_183394 Homo sapiens Ca2+-dependent secretion activator (CADPS), transcript varia NM\_183395 Homo sapiens cold autoinflammatory syndrome 1 (CIAS1), transcript variant NM\_183397 Homo sapiens peroxisomal membrane protein 4, 24kDa (PXMP4), transcript NM\_183398 Homo sapiens ring finger protein 14 (RNF14), transcript variant 2, mRNA NM\_183399 Homo sapiens ring finger protein 14 (RNF14), transcript variant 3, mRNA NM\_183400 Homo sapiens ring finger protein 14 (RNF14), transcript variant 4, mRNA NM\_183401 Homo sapiens ring finger protein 14 (RNF14), transcript variant 5, mRNA NM\_183404 Homo sapiens retinoblastoma-like 1 (p107) (RBL1), transcript variant 2, mRN NM\_183412 Homo sapiens F-box protein 44 (FBXO44), transcript variant 2, mRNA NM 183413 Homo sapiens F-box protein 44 (FBXO44), transcript variant 3, mRNA NM\_183414 Homo saplens ubiquitin protein ligase E3B (UBE3B), transcript variant 2, mR NM\_183415 Homo sapiens ubiquitin protein ligase E3B (UBE3B), transcript variant 3, mR NM\_183416 Homo sapiens kinesin family member 1B (KIF1B), transcript variant 2, mRN/ NM\_183418 Homo sapiens molybdenum cofactor synthesis 2 (MOCS2), transcript variant NM\_183419 Homo sapiens ring finger protein 19 (RNF19), transcript variant 1, mRNA NM\_183420 Homo sapiens F-box protein 25 (FBXO25), transcript variant 2, mRNA NM 183421 Homo sapiens F-box protein 25 (FBXO25), transcript variant 1, mRNA NM\_183422 Homo sapiens transforming growth factor beta 1 induced transcript 4 (TGFB) NM\_183425 Homo sapiens RNA-binding region (RNP1, RRM) containing 1 (RNPC1), trans NM\_184041 Homo saplens aldolase A, fructose-bisphosphate (ALDOA), transcript variant NM 184042 Homo saplens Cohen syndrome 1 (COH1), transcript variant 2, mRNA NM\_184043 Homo sapiens aldolase A, fructose-bisphosphate (ALDOA), transcript variant NM\_184085 Homo sapiens ring finger protein 29 (RNF29), transcript variant 1, mRNA NM\_184086 Homo saplens ring finger protein 29 (RNF29), transcript variant 3, mRNA NM 184087 Homo sapiens ring finger protein 29 (RNF29), transcript variant 4, mRNA Homo sapiens NCK interacting protein with SH3 domain (NCKIPSD), transcr NM 184231 NM 184234 Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2), tran-NM\_1 84237 Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2), trar NM\_184241 Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2), trar NM\_184244 Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2), trar NM\_187841 Homo sapiens ring finger protein 30 (RNF30), transcript variant 2, mRNA NM 194071 Homo sapiens cAMP responsive element binding protein 3-like 2 (CREB3L2) NM\_194072 Homo sapiens spermatid-specific linker histone H1-like protein (HILS1), mRN NM 194247 Homo sapiens heterogeneous nuclear ribonucleoprotein A3 (HNRPA3), mRN NM\_194248 Homo sapiens otoferlin (OTOF), transcript variant 1, mRNA NM 194249 Homo sapiens dead end homolog 1 (zebrafish) (DND1), mRNA Homo sapiens similar to C630007C17Rik protein (LOC91752), mRNA NM 194250 NM 194251 Homo sapiens G protein-coupled receptor 151 (GPR151), mRNA Homo sapiens chromosome 9 open reading frame 20 (C9orf20), mRNA NM\_194252 Homo sapiens solute carrier family 19 (folate transporter), member 1 (SLC19 NM 194255 Homo sapiens ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast) (UE NM 194259 NM 194260 Homo sapiens ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast) (UE NM\_194261 Homo sapiens ubiquitin-conjugating enzyme E2I (UBC9 homolog, yeast) (UE NM 194270 Homo sapiens protein containing single MORN motif in testls (MOPT), mRN/ NM 194271 Homo sapiens ring finger protein 34 (RNF34), transcript variant 1, mRNA NM\_194276 Homo sapiens hypothetical protein FLJ20209 (FLJ20209), mRNA NM 194277 Homo sapiens hypothetical protein LOC90167 (LOC90167), mRNA

NM 194278 Homo sapiens chromosome 14 open reading frame 43 (C14orf43), mRNA NM 194279 Homo sapiens HESB like domain containing 1 (HBLD1), mRNA NM 194281 Homo sapiens chromosome 18 open reading frame 37 (C18orf37), mRNA NM 194282 Homo sapiens hypothetical protein DKFZp686L1814 (DKFZp686L1814), mR NM 194283 Homo sapiens hypothetical protein LOC134218 (LOC134218), mRNA NM\_194284 Homo sapiens claudin 23 (CLDN23), mRNA NM 194285 Homo sapiens hypothetical protein FLJ39441 (FLJ39441), mRNA NM\_194286 Homo sapiens KIAA1853 protein (KIAA1853), mRNA NM 194287 Homo sapiens chromosome 14 open reading frame 166B (C14orf166B), mR NM\_194288 Homo sapiens hypothetical protein LOC146712 (LOC146712), mRNA NM 194289 Homo sapiens hypothetical protein LOC152195 (LOC152195), mRNA NM 194290 Homo sapiens hypothetical protein LOC153684 (LOC153684), mRNA NM 194291 Homo sapiens hypothetical protein BC017881 (LOC157378), mRNA NM 194292 Homo sapiens hypothetical protein DKFZp761A078 (DKFZp761A078), mRN NM\_194293 Homo sapiens cardiomyopathy associated 1 (CMYA1), mRNA NM\_194294 Homo sapiens hypothetical protein LOC169355 (LOC169355), mRNA NM\_194295 Homo sapiens hypothetical protein DKFZp434I1020 (DKFZp434I1020), mRN NM\_194298 Homo sapiens solute carrier family 16 (monocarboxylic acid transporters), mi NM\_194299 Homo sapiens hypothetical protein LOC221711 (LOC221711), mRNA NM\_194300 Homo sapiens hypothetical protein LOC223075 (LOC223075), mRNA NM\_194302 Homo saplens hypothetical protein DKFZp434O0527 (DKFZp434O0527), mf NM\_194303 Homo sapiens chromosome 10 open reading frame 39 (C10orf39), mRNA NM\_194309 Homo saplens chromosome 21 open reading frame 125 (C21orf125), mRNA NM\_194310 Homo sapiens hypothetical protein LOC284837 (LOC284837), mRNA NM\_194312 Homo sapiens hypothetical protein LOC339768 (LOC339768), mRNA NM\_194313 Homo sapiens chromosome 9 open reading frame 48 (C9orf48), mRNA NM\_194314 Homo sapiens FRBZ1 protein (FRBZ1), mRNA NM\_194315 Homo saplens ubiquitin-conjugating enzyme E2, J2 (UBC6 homolog, yeast) ( NM 194316 Homo sapiens ubiquitin-conjugating enzyme E2, J2 (UBC6 homolog, yeast) ( NM 194317 Homo sapiens hypothetical protein MGC52057 (MGC52057), mRNA NM 194318 Homo sapiens beta 3-glycosyltransferase-like (B3GTL), mRNA NM 194319 Homo saplens zinc finger protein 542 (ZNF542), mRNA NM 194320 Homo sapiens zinc finger protein 169 (ZNF169), mRNA NM 194322 Homo sapiens otoferlin (OTOF), transcript variant 3, mRNA NM\_194323 Homo saplens otoferlin (OTOF), transcript variant 4, mRNA NM\_194324 Homo sapiens hypothetical protein MGC39900 (MGC39900), mRNA NM\_194325 Homo sapiens zinc finger protein 30 (KOX 28) (ZNF30), mRNA NM\_194326 Homo sapiens hypothetical protein MGC52010 (MGC52010), mRNA NM 194327 Homo sapiens galectin-3 internal gene (GALIG), mRNA NM\_194328 Homo saplens ring finger protein 38 (RNF38), transcript variant 2, mRNA NM 194329 Homo sapiens ring finger protein 38 (RNF38), transcript variant 3, mRNA NM 194330 Homo sapiens ring finger protein 38 (RNF38), transcript variant 5, mRNA NM 194331 Homo sapiens ring finger protein 38 (RNF38), transcript variant 4, mRNA NM 194332 Homo sapiens ring finger protein 38 (RNF38), transcript variant 6, mRNA NM 194352 Homo sapiens ring finger protein 40 (RNF40), transcript variant 2, mRNA NM\_194356 Homo sapiens epimorphin (EPIM), transcript variant 2, mRNA NM 194358 Homo sapiens ring finger protein 41 (RNF41), transcript variant 2, mRNA NM\_194359 Homo sapiens ring finger protein 41 (RNF41), transcript variant 3, mRNA NM\_194428 Homo sapiens DEAH (Asp-Glu-Ala-His) box polypeptide 34 (DHX34), transcr NM\_194429 Homo sapiens FGFR1 oncogene partner (FGFR10P), transcript variant 2, m NM 194430 Homo sapiens ribonuclease, RNase A family, 4 (RNASE4), transcript variant NM 194431 Homo sapiens ribonuclease, RNase A family, 4 (RNASE4), transcript variant NM 194434 Homo sapiens VAMP (vesicle-associated membrane protein)-associated pro NM 194435 Homo sapiens vasoactive intestinal peptide (VIP), transcript variant 2, mRNA NM 194436 Homo sapiens lactate dehydrogenase D (LDHD), nuclear gene encoding mit NM 194439 Homo sapiens hypothetical protein LOC285498 (LOC285498), mRNA NM\_194441 Homo sapiens butyrophilin, subfamily 3, member A1 (BTN3A1), transcript va

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NM 194442 Homo sapiens lamin B receptor (LBR), transcript variant 2, mRNA NM 194447 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 194448 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 194449 Homo sapiens pleckstrin homology domain containing, family E (with leucine NM 194450 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 194451 Homo sapiens lipoic acid synthetase (LIAS), nuclear gene encoding mitocho NM\_194452 Homo sapiens ring finger protein 121 (RNF121), transcript variant 2, mRNA NM 194453 Homo sapiens ring finger protein 121 (RNF121), transcript variant 3, mRNA NM\_194454 Homo sapiens cerebral cavemous malformations 1 (CCM1), transcript varian NM 194455 Homo sapiens cerebral cavernous malformations 1 (CCM1), transcript varian NM 194456 Homo sapiens cerebral cavernous malformations 1 (CCM1), transcript varian NM 194457 Homo sapiens ubiquitin-conjugating enzyme E2, J2 (UBC6 homolog, yeast) ( NM 194458 Homo sapiens ubiquitin-conjugating enzyme E2, J2 (UBC6 homolog, yeast) ( NM 194460 Homo sapiens ring finger protein 126 (RNF126), transcript variant 2, mRNA NM 194463 Homo sapiens ring finger protein 128 (RNF128), transcript variant 1, mRNA NM 197939 Homo sapiens ring finger protein 135 (RNF135), transcript variant 2, mRNA Homo sapiens similar to ADAMTS-10 precursor (A disintegrin and metallopro NM 197941 NM 197947 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM\_197948 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM\_197949 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 197950 Homo sapiens C-type (calclum dependent, carbohydrate-recognition domain NM 197951 Homo saplens C-type (calcium dependent, carbohydrate-recognition domain NM 197952 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 197953 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 197954 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM 197955 Homo sapiens normal mucosa of esophagus specific 1 (NMES1), transcript v NM 197956 Homo sapiens chromosome 9 open reading frame 90 (C9orf90), mRNA NM 197957 Homo sapiens MAX protein (MAX), transcript variant 6, mRNA NM 197958 Homo sapiens acheron (FLJ11196), transcript variant 2, mRNA NM 197960 Homo sapiens dipeptidylpeptidase 8 (DPP8), transcript variant 3, mRNA NM\_197961 Homo saplens dipeptidylpeptidase 8 (DPP8), transcript variant 4, mRNA NM\_197962 Homo sapiens glutaredoxin 2 (GLRX2), transcript variant 2, mRNA NM\_197964 Homo sapiens hypothetical protein HSPC268 (HSPC268), mRNA NM\_197965 Homo sapiens sodium-dependent organic anion transporter (SOAT), mRNA NM 197966 Homo saplens BH3 Interacting domain death agonist (BID), transcript variant NM 197967 Homo sapiens BH3 interacting domain death agonist (BID), transcript variant NM 197968 Homo sapiens zinc finger protein 198 (ZNF198), mRNA NM 197970 Homo sapiens bol, boule-like (Drosophila) (BOLL), transcript variant 1, mRN/ NM\_197972 Homo sapiens non-metastatic cells 7, protein expressed in (nucleoside-dipho NM\_197973 Homo sapiens asparagine-linked glycosylation 2 homolog (yeast, alpha-1,3-r Homo sapiens butyrophilin, subfamily 3, member A3 (BTN3A3), transcript va NM\_197974 NM\_197975 Homo saplens butyrophilln-like 3 (BTNL3), transcript variant 1, mRNA NM 197976 Homo saplens PBX/knotted 1 homeobox 1 (PKNOX1), transcript variant 2, m NM 197977 Homo sapiens zinc finger protein 189 (ZNF189), mRNA NM 197978 Homo sapiens hemogen (HEMGN), transcript variant 2, mRNA NM 198038 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 9 (I NM 198039 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 9 (I NM 198040 Homo sapiens polyhomeotic-like 2 (Drosophila) (PHC2), transcript variant 1, Homo sapiens nudix (nucleoside diphosphate linked molety X)-type motif 6 (I NM 198041 NM 198042 Homo sapiens PDZ and LIM domain 2 (mystique) (PDLIM2), transcript variar NM 198043 Homo sapiens zinc finger, DHHC domain containing 16 (ZDHHC16), transcri NM 198044 Homo sapiens zinc finger, DHHC domain containing 16 (ZDHHC16), transcri NM 198045 Home sapiens zinc finger, DHHC domain containing 16 (ZDHHC16), transcri NM 198046 Home sapiens zinc finger, DHHC domain containing 16 (ZDHHC16), transcri NM 198047 Homo sapiens 3-hydroxylsobutyryl-Coenzyme A hydrolase (HIBCH), transcrip NM\_198053 Homo sapiens CD3Z antigen, zeta polypeptide (TiT3 complex) (CD3Z), trans NM 198055 Homo sapiens zinc finger protein 42 (myelold-specific retinoic acid-responsiv

- NM\_198056 Homo sapiens sodium channel, voltage-gated, type V, alpha (long QT syndro NM\_198057 Homo sapiens delta sleep inducing peptide, immunoreactor (DSIPI), transcri
- NM\_198058 Homo sapiens zinc finger protein 266 (ZNF266), mRNA NM\_198080 Homo sapiens nebulin-related anchoring protein (NRAP), transcript variant 2 NM\_198081 Homo sapiens carboxylesterase 2 (Intestine, liver) (CES2), transcript variant
- NM\_198066 Homo sapiens glucosamine-phosphate N-acetyltransferase 1 (GNPNAT1), rr NM\_198074 Homo sapiens olfactory receptor, family 2, subfamily C, member 3 (OR2Cs), NM\_198075 Homo sapiens hypothetical protein DKF2p7611.1518 (DKF2p7611.1518), mR NM\_198076 Homo sapiens family with sequence similarity 38, member A (FAM36A), mRI
- NM 198077 Homo sapiens gm117 (gm117), mRNA
- NM\_198078 Homo sapiens chromosome 21 open reading frame 121 (C21orf121), mRNA NM 198079 Homo sapiens similar to golgi autoantigen, golgin subfamily a (FLJ40113), m
- NM\_198080 Homo sapiens hypothetical protein LOC253827 (LOC253827), mRNA
- NM\_198081 Homo sapiens sex comb on midleg-like 4 (Drosophila) (SCML4), mRNA NM\_198082 Homo sapiens hypothetical protein LOC284001 (LOC284001), mRNA
- NM\_198083 Homo sapiens dehydrogenase/reductase (SDR family) member 4 like 2 (DHI NM\_198085 Homo sapiens ring finger protein 148 (RNF148), mRNA
- NM\_198086 Homo saplens jub, ajuba homolog (Xenopus laevis) (JUB), transcript variant
- NM\_198087 Homo sapiens zinc finger protein 200 (ZNF200), mRNA NM\_198088 Homo sapiens zinc finger protein 200 (ZNF200), mRNA
- NM\_198089 Homo sapiens zinc finger protein 155 (pHZ-96) (ZNF155), transcript variant 2
- NM\_198097 Homo sapiens chromosome 7 open reading frame 28B (C7orf28B), mRNA
- NM\_198098 Homo sapiens aquaporin 1 (channel-forming integral protein, 28kDa) (AQP1; NM\_198120 Homo saplens estrogen receptor binding site associated, antigen, 9 (EBAG9
- NM\_198123 Homo saplens CUB and Sushi multiple domains 3 (CSMD3), transcript variat NM\_198124 Homo saplens CUB and Sushi multiple domains 3 (CSMD3), transcript variat NM 198125 Homo saplens TYRO protein tyrosine kinase binding protein (TYROBP), tran
- NM\_198128 Homo sapiens ring finger protein 138 (RNF138), transcript variant 2, mRNA NM\_198129 Homo sapiens laminin, alpha 3 (LAMA3), transcript variant 1, mRNA
- NM\_198138 Homo sapiens SEC31-like 2 (S. cerevisiae) (SEC31L2), transcript variant 2, i
- NM\_198139 Homo sapiens semenogelin I (SEMG1), transcript variant 2, mRNA
- NM\_198141 Homo sapiens glucosidase, alpha; neutral C (GANC), mRNA
- NM\_198147 Homo sapiens hypothetical protein LOC116236 (LOC116236), mRNA
- NM\_198148 Homo saplens carboxypeptidase X (M14 family), member 2 (CPXM2), mRNA NM\_198149 Homo saplens chromosome 1 open reading frame 40 (C1orf40), mRNA
- NM\_198150 Homo sapiens hypothetical protein DKFZp313G1735 (DKFZp313G1735), mf NM\_198151 Homo sapiens hypothetical protein LOC253012 (LOC253012), mRNA
- NM\_198152 Homo sapiens urotensin II-related peptide (URP), mRNA
- NM\_198153 Homo saplens triggering receptor expressed on myeloid cells-like 4 (TREML-
- NM\_198154 Homo sapiens hypothetical protein LOC339168 (LOC339168), mRNA
  NM\_198155 Homo sapiens chromosome 21 open reading frame 33 (C21orf33), nuclear g
- NM\_198156 Homo sapiens chromosome 21 open reading frame 33 (C21off33), nuclear g
- NM\_198157 Homo sapiens ubiquitin-conjugating enzyme E2L 3 (UBE2L3), transcript vari:
  NM\_198158 Homo sapiens microphthalmia-associated transcription factor (MITF), transcr
- NM\_198159 Homo sapiens microphthalmia-associated transcription factor (MIT), transcri
- NM\_198173 Homo sapiens transcription factor CP2-like 4 (TFCP2L4), transcript variant 2
  NM\_198174 Homo sapiens transcription factor CP2-like 4 (TFCP2L4), transcript variant 3
- NM\_198175 Homo sapiens non-metastatic cells 1, protein (NM23A) expressed in (NME1)
  NM\_198177 Homo sapiens microphthalmia-associated transcription factor (MITF), transcr
- NM\_198178 Homo sapiens microphthalmia-associated transcription factor (MITF), transcr NM\_198179 Homo sapiens G protein-coupled receptor 103 (GPR103), mRNA
- NM 198180 Homo sapiens P518 precursor protein (P518), mRNA
- NM\_198181 Homo sapiens similar to golgi autoantigen, golgin subfamily a, 2; SY11 prote
- NM\_198182 Homo sapiens transcription factor CP2-like 2 (TFCP2L2), transcript variant 2
  NM\_198183 Homo sapiens ubiquitin-conjugating enzyme E2L 6 (UBE2L6), transcript variant 2
- NM\_198184 Homo sapiens osteocnn (OSTN), mRNA
- NM\_198185 Homo sapiens oviductin protease (OVTN), mRNA

NM\_198186 Homo sapiens astrotactin 2 (ASTN2), transcript variant 2, mRNA NM\_198187 Homo sapiens astrotactin 2 (ASTN2), transcript variant 3, mRNA NM\_198188 Homo sapiens astrotactin 2 (ASTN2), transcript variant 4, mRNA NM\_198189 Homo sapiens COP9 constitutive photomorphogenic homolog subunit 8 (Ara NM\_198194 Homo sapiens stomatin (STOM), transcript variant 2, mRNA NM\_198195 Homo sapiens ubiquitin-activating enzyme E1C (UBA3 homolog, yeast) (UBE NM\_198196 Homo sapiens CD96 antigen (CD96), transcript variant 1, mRNA NM 198197 Homo sapiens ubiquitin-activating enzyme E1C (UBA3 homolog, yeast) (UBE NM 198201 Homo saplens processing of precursor 5, ribonuclease P/MRP subunit (S. ce NM 198202 Homo sapiens processing of precursor 5, ribonuclease P/MRP subunit (S. ce NM 198204 Homo sapiens transcription factor-like 4 (TCFL4), transcript variant 2, mRNA NM 198205 Homo sapiens transcription factor-like 4 (TCFL4), transcript variant 1, mRNA NM 198207 Homo sapiens LAG1 longevity assurance homolog 1 (S. cerevisiae) (LASS1) NM\_198212 Homo sapiens caveolin 2 (CAV2), transcript variant 2, mRNA NM\_198213 Homo sapiens 2'-5'-oligoadenylate synthetase-like (OASL), transcript variant NM\_198215 Homo sapiens family with sequence similarity 13, member C1 (FAM13C1), tr NM\_198216 Homo sapiens small nuclear ribonucleoprotein polypeptides B and B1 (SNRF NM\_198217 Homo sapiens inhibitor of growth family, member 1 (ING1), transcript variant NM\_198218 Homo sapiens inhibitor of growth family, member 1 (ING1), transcript variant NM\_198219 Homo sapiens Inhibitor of growth family, member 1 (ING1), transcript variant NM\_198220 Homo sapiens small nuclear ribonucleoprotein polypeptide B" (SNRPB2), tra NM 198225 Homo sapiens Rho-related BTB domain containing 1 (RHOBTB1), transcript NM\_198227 Homo sapiens regulator of G-protein signalling 12 (RGS12), transcript varian NM\_198229 Homo sapiens regulator of G-protein signalling 12 (RGS12), transcript varian NM\_198230 Homo saplens regulator of G-protein signalling 12 (RGS12), transcript varian NM\_198232 Homo sapiens ribonuclease, RNase A family, 1 (pancreatic) (RNASE1), trans NM\_198234 Homo sapiens ribonuclease, RNase A family, 1 (pancreatic) (RNASE1), trans NM\_198235 Homo sapiens ribonuclease, RNase A family, 1 (pancreatic) (RNASE1), trans NM\_198236 Homo sapiens Rho guanine nucleotide exchange factor (GEF) 11 (ARHGEF-NM\_198239 Homo sapiens WNT1 inducible signaling pathway protein 3 (WISP3), transcr NM\_198240 Homo sapiens restin (Reed-Steinberg cell-expressed intermediate filament-a NM\_198241 Homo sapiens eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1), tr NM\_198242 Homo sapiens eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1), tr NM\_198243 Homo sapiens ankyrin repeat and SOCS box-containing 7 (ASB7), transcript NM\_198244 Homo sapiens eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1), tr NM\_198252 Homo sapiens gelsolin (amyloidosis, Finnish type) (GSN), transcript variant 2 NM\_198253 Homo sapiens telomerase reverse transcriptase (TERT), transcript variant 3, NM\_198254 Homo saplens telomerase reverse transcriptase (TERT), transcript variant 4, NM\_198255 Homo sapiens telomerase reverse transcriptase (TERT), transcript variant 2, NM\_198256 Homo sapiens E2F transcription factor 6 (E2F6), transcript variant b, mRNA NM 198257 Homo sapiens E2F transcription factor 6 (E2F6), transcript variant e, mRNA NM\_198258 Homo saplens E2F transcription factor 6 (E2F6), transcript variant 4, mRNA NM\_198261 Homo sapiens similar to splicing factor, arginine/serine-rich 4 (FLJ11021), tra NM 198262 Homo sapiens similar to splicing factor, arginine/serine-rich 4 (FLJ11021), tra NM 198263 Homo sapiens similar to splicing factor, arginine/serine-rich 4 (FLJ11021), tra NM\_198264 Homo saplens chromosome 1 open reading frame 2 (C1orf2), transcript varia NM\_198265 Homo sapiens SPO11 meiotic protein covalently bound to DSB-like (S. cerev NM\_198266 Home sapiens inhibitor of growth family, member 3 (ING3), transcript variant NM\_198267 Ho mo sapiens inhibitor of growth family, member 3 (ING3), transcript variant NM\_198268 Homo sapiens homeodomain interacting protein kinase 1 (HIPK1), transcript NM 198269 Homo sapiens homeodomain interacting protein kinase 1 (HIPK1), transcript NM\_198270 Homo sapiens Nance-Horan syndrome (congenital cataracts and dental anor NM\_198271 Homo sapiens leiomodin 3 (fetal) (LMOD3), mRNA NM\_198274 Homo sapiens SET and MYND domain containing 1 (SMYD1), mRNA NM\_198275 Homo sapiens hypothetical protein LOC196264 (LOC196264), mRNA NM\_198276 Ho mo sapiens transmembrane protein 17 (TMEM17), mRNA NM\_198277 Homo sapiens solute carrier family 37 (glycerol-3-phosphate transporter), me

NM\_198278 Homo sapiens hypothetical protein LOC255743 (LOC255743), mRNA NM\_198279 Homo sapiens chromosome X open reading frame 23 (CXorf23), mRNA NM 198281 Homo sapiens hypothetical protein LOC285513 (LOC285513), mRNA NM\_198282 Homo sapiens hypothetical protein LOC340061 (LOC340061), mRNA NM\_198283 Homo sapiens EGF-like-domain, multiple 11 (EGFL11), mRNA NM\_198284 Homo sapiens hypothetical protein LOC349114 (LOC349114), mRNA NM\_198285 Homo sapiens hypothetical protein LOC349136 (LOC349136), mRNA NM\_198287 Homo sapiens inhibitor of growth family, member 4 (ING4), transcript variant NM\_198289 Homo sapiens cell death-inducing DFFA-like effector a (CIDEA), transcript ve NM\_198291 Homo sapiens v-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog NM\_198309 Homo sapiens tetratricopeptide repeat domain 8 (TTC8), transcript variant 1, NM\_198310 Homo sapiens tetratricopeptide repeat domain 8 (TTC8), transcript variant 2, NM\_198312 Homo sapiens TAK1-binding protein 3 (TAB3), transcript variant 2, mRNA NM 198315 Homo sapiens loss of heterozygosity, 11, chromosomal region 2, gene A (LC NM\_198316 Homo sapiens tensin like C1 domain containing phosphatase (TENC1), trans NM\_198317 Homo sapiens kelch-like 17 (Drosophila) (KLHL17), mRNA NM\_198318 Homo sapiens HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae) (HRMT NM\_198319 Homo saplens HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae) (HRMT NM\_198320 Homo sapiens carboxypeptidase M (CPM), transcript variant 2, mRNA NM 198321 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga NM\_198324 Homo sapiens citrate synthase (CS), nuclear gene encoding mitochondrial pl NM\_198325 Homo sapiens E2F transcription factor 6 (E2F6), transcript variant c, mRNA NM\_198327 Homo sapiens suppression of tumorigenicity 7 like (ST7L), transcript variant NM\_198328 Homo saplens suppression of tumorigenicity 7 like (ST7L), transcript variant NM 198329 Homo sapiens ubiquitin-activating enzyme E1-domain containing 1 (UBE1DC NM\_198330 Homo sapiens inositol polyphosphate-5-phosphatase F (INPP5F), transcript NM 198331 Homo sapiens inositol polyphosphate-5-phosphatase F (INPP5F), transcript NM\_198333 Homo sapiens purinergic receptor P2Y, G-protein coupled, 10 (P2RY10), trail NM\_198334 Homo sapiens glucosidase, alpha; neutral AB (GANAB), mRNA NM\_198335 Homo sapiens glucosidase, alpha; neutral AB (GANAB), mRNA NM\_198336 Homo sapiens insulin induced gene 1 (INSIG1), transcript variant 2, mRNA NM\_198337 Homo sapiens insulin induced gene 1 (INSIG1), transcript variant 3, mRNA NM\_198353 Homo sapiens potassium channel tetramerisation domain containing 8 (KCT NM 198376 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198377 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198378 Homo saplens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198379 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198380 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CACI) NM\_198381 Homo sapiens E74-like factor 5 (ets domain transcription factor) (ELF5), tran NM\_198382 Homo saplens calcium channel, voltage-dependent, alpha 1G subunit (CACI) NM\_198383 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198384 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198385 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CACI) NM 198386 Homo saplens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198387 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198388 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM 198389 Homo sapiens lung type-I cell membrane-associated glycoprotein (T1A-2), tr. NM\_198390 Homo sapiens c-Maf-inducing protein (CMIP), transcript variant C-mip, mRN/ NM\_198391 Homo sapiens fibronectin leucine rich transmembrane protein 3 (FLRT3), tra NM\_198392 Homo sapiens transcription factor 21 (TCF21), transcript variant 1, mRNA NM\_198393 Homo sapiens testis expressed sequence 14 (TEX14), transcript variant 1, m NM\_198394 Homo sapiens chromosome 9 open reading frame 85 (C9orf85), transcript ve NM\_198395 Homo sapiens Ras-GTPase-activating protein SH3-domain-binding protein (I NM\_198396 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198397 Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CAC) NM\_198398 Homo sapiens serologically defined breast cancer antigen 84 (SDBCAG84). NM\_198399 Homo sapiens cyclic AMP-regulated phosphoprotein, 21 kD (ARPP-21), trans

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NM 198400 Homo sapien's neural precursor cell expressed, developmentally down-regula NM 198401 Homo sapien's hypothetical protein LOC157567 (LOC157567), mRNA NM 198402 Homo sapien's protein tyrosine phosphatase-like (proline instead of catalytic NM 198403 Homo sapien's monocyte to macrophage differentiation-associated 2 (MMD2) NM 198404 Homo sapien's potassium channel tetramerisation domain containing 4 (KCT NM\_198406 Homo sapien's progestin and adipoQ receptor family member VI (PAQR6), tr NM 198407 Homo sapien's growth hormone secretagogue receptor (GHSR), transcript va NM\_198426 Homo sapien's putative breast adenocarcinoma marker (32kD) (BC-2), transc NM\_198427 Homo sapien's brevican (BCAN), transcript variant 2, mRNA NM\_198428 Homo sapien's parathyroid hormone-responsive B1 gene (B1), transcript vari-NM\_198430 Homo sapiens regulator of G-protein signalling 12 (RGS12), transcript varian NM\_198431 Homo sapien's heat shock 70kDa protein 4 (HSPA4), transcript variant 2, mR NM 198432 Homo saplen's regulator of G-protein signalling 12 (RGS12), transcript varian NM 198433 Homo sapien's serine/threonine kinase 6 (STK6), transcript variant 1, mRNA NM 198434 Home sapien's serine/threonine kinase 6 (STK6), transcript variant 3, mRNA NM 198435 Homo sapien s senne/threonine kinase 6 (STK6), transcript variant 4, mRNA NM 198436 Homo sapien's serine/threonine kinase 6 (STK6), transcript variant 5, mRNA NM 198437 Homo saplen's serine/threonine kinase 6 (STK6), transcript variant 6, mRNA NM\_198439 Homo sapien's kelch repeat and BTB (POZ) domain containing 3 (KBTBD3), NM\_198440 Homo sapien's chromosome 22 open reading frame 14 (C22orf14), transcript NM\_198441 Homo sapien's FLJ40296 protein (FLJ40296), mRNA NM 198442 Homo sapien's FLJ45651 protein (FLJ45651), mRNA NM 198443 Homo sapien's MRCC2446 (UNQ2446), mRNA NM\_198444 Homo sapien's GPAD9366 (UNQ9366), mRNA NM 198445 Homo sapien's FLJ45909 protein (FLJ45909), mRNA NM 198446 Homo sapiens FLJ45459 protein (FLJ45459), mRNA NM 198447 Homo saplen's FLJ42654 protein (FLJ42654), mRNA NM\_198448 Homo sapien's LPPM429 (UNQ429), mRNA NM\_198449 Homo sapiens similar to embigin (MGC71745), mRNA NM\_198450 Homo sapiens AAIR8193 (UNQ8193), mRNA NM\_198451 Homo sapiens forkhead box R2 (FOXR2), mRNA NM 198452 Homo sapien's pregnancy upregulated non-ubiquitously expressed CaM kina NM\_198457 Homo sapiens zinc finger protein 600 (ZNF600), mRNA NM\_198458 Homo saplens zinc finger protein 497 (ZNF497), mRNA NM\_198459 Homo sapiens FLJ37099 protein (FLJ37099), mRNA NM\_198460 Homo sapiens hypothetical protein DKFZp686G0786 (DKFZp686G0786), mf NM\_198461 Homo saplens FLJ45273 protein (FLJ45273), mRNA NM 198462 Homo sapiens FLJ46154 protein (FLJ46154), mRNA NM\_198463 Homo sapiens FLJ42117 protein (FLJ42117), mRNA NM\_198464 Homo sapiens tryptophan/serine protease (UNQ9391), mRNA NM\_198465 Homo sapiens Nik related kinase (NRK), mRNA NM\_198466 Homo sapiens FLJ37183 protein (FLJ37183), mRNA NM\_198467 Homo sapiens FLJ42526 protein (FLJ42526), mRNA NM\_198468 Homo sapiens chromosome 6 open reading frame 167 (C6orf167), mRNA NM\_198469 Homo sapiens chromosome 9 open reading frame 18 (C9orf18), mRNA NM 198471 Homo sapiens FLJ46061 protein (FLJ46061), mRNA NM\_198472 Homo sapiens chromosome 10 open reading frame 125 (C10orf125), mRNA NM 198473 Homo sapiens FLJ46111 protein (FLJ46111), mRNA NM 198474 Homo sapiens offactomedin-like 1 (OLFML1), mRNA NM 198476 Homo sapiens FLJ41131 protein (FLJ41131), mRNA NM 198477 Homo sapiens DMC (UNQ473), mRNA NM\_198478 Homo sapiens NTPase, KAP family P-loop domain containing 1 (NKPD1). ml NM\_198479 Homo sapiens FLJ40321 protein (FLJ40321), mRNA NM\_198480 Homo sapiens zinc finger protein 615 (ZNF615), mRNA NM 198481 Homo sapiens LAIR hlog (UNQ3033), mRNA NM 198482 Homo sapiens similar to B-cell linker; B cell linker protein (LOC284948), trans

NM 198483 Homo sapiens FLJ46536 protein (FLJ46536), mRNA

NM 198484 Homo sapiens zinc finger protein 621 (ZNF621), mRNA NM\_198485 Homo sapiens FLJ41238 protein (FLJ41238), mRNA NM 198486 Homo sapiens ribosomal protein L7-like 1 (RPL7L1), mRNA NM 198488 Homo sapiens FLJ46072 protein (FLJ46072), mRNA NM 198489 Homo sapiens similar to DLNB14 (DLNB14), mRNA NM 198490 Homo sapiens RAB43, member RAS oncogene family (RAB43), mRNA NM 198491 Homo sapiens FLJ44299 protein (FLJ44299), mRNA NM\_198492 Homo sapiens liver and lymph node sinusoidal endothelial cell C-type lectin ( NM 198493 Homo sapiens FLJ45235 protein (FLJ45235), mRNA NM 198494 Homo sapiens FLJ16030 protein (FLJ16030), mRNA NM 198495 Homo sapiens CTAGE family, member 4 (CTAGE4), mRNA NM 198496 Homo sapiens A-domain containing protein similar to matrilin and collagen (/ NM 198498 Homo sapiens Similar to RIKEN cDNA 1810046K07 gene (MGC50104), mRt NM 198499 Homo sapiens FLJ46156 protein (FLJ46156), mRNA NM\_198501 Homo sapiens FLJ42461 protein (FLJ42461), mRNA NM\_198502 Homo sapiens FLJ43826 protein (FLJ43826), mRNA NM 198503 Homo saplens sodium- and chloride-activated ATP-sensitive potassium char NM 198504 Homo saplens progestin and adipoQ receptor family member IX (PAQR9), m NM 198506 Homo sapiens FLJ44691 protein (FLJ44691), mRNA NM 198507 Homo sapiens HGS RE408 (UNQ1912), mRNA NM 198508 Homo saplens FLJ44186 protein (FLJ44186), mRNA NM 198510 Homo sapiens ITI-like protein (UNQ6369), mRNA NM 198511 Homo sapiens FLJ42925 protein (FLJ42925), mRNA NM 198512 Homo saplens FLJ25989 protein (FLJ25989), mRNA NM\_198513 Homo sapiens CGI-72 protein (CGI-72), transcript variant 3, mRNA NM\_198514 Homo sapiens NHL repeat containing 2 (NHLRC2), mRNA NM\_198516 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga NM 198517 Homo sapiens FLJ00332 protein (FLJ00332), mRNA NM 198519 Homo sapiens similar to Cytochrome c. somatic (MGC12965), mRNA NM 198520 Homo sapiens FLJ44112 protein (FLJ44112), mRNA NM 198521 Homo sapiens FLJ25323 protein (FLJ25323), mRNA NM 198524 Homo saplens LOC161577 protein (LOC161577), mRNA NM 198525 Homo sapiens similar to kinesin family member 21A; N-5 kinesin (LOC37465 NM\_198526 Homo sapiens hypothetical protein DKFZp547K1113 (DKFZp547K1113), mF NM 198527 Homo sapiens Similar to RIKEN cDNA 1110033009 gene (MGC45386), mRI NM\_198529 Homo sapiens FLJ46247 protein (FLJ46247), mRNA NM 198531 Homo sapiens ATPase, Class II, type 9B (ATP9B), mRNA NM 198532 Homo sapiens chromosome 19 open reading frame 35 (C19orf35), mRNA NM\_198533 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrip NM\_198534 Homo saplens FLJ35784 protein (FLJ35784), mRNA NM 198537 Homo saplens FLJ44968 protein (FLJ44968), mRNA NM 198538 Homo saplens HLAR698 (UNQ698), mRNA NM 198539 Homo sapiens zinc finger protein 568 (ZNF568), mRNA NM 198540 Homo saplens UDP-Gal:betaGal beta 1,3-galactosyltransferase polypeptide NM 198541 Homo sapiens insulin growth factor-like family member 1 (IGFL1), mRNA NM 198542 Homo sapiens similar to hypothetical protein FLJ23233 (MGC4728), mRNA NM\_198543 Homo sapiens LOC148872 protein (LOC148872), mRNA NM\_198544 Homo sapiens cortistatin (CORT), transcript variant 1, mRNA NM 198545 Homo sapiens hypothetical gene supported by AK075558; BC021286 (LOC3 NM 198546 Homo sapiens hypothetical protein LOC374955 (LOC374955), mRNA NM 198547 Homo sapiens FLJ46354 protein (FLJ46354), mRNA NM 198549 Homo sapiens FLJ35093 protein (FLJ35093), mRNA NM\_198550 Homo sapiens FLJ36760 protein (FLJ36760), mRNA NM 198552 Homo sapiens hypothetical gene supported by BC009447 (MGC15887), mRI NM 198553 Homo sapiens FLJ30851 protein (FLJ30851), mRNA

NM\_198554 Homo sapiens thyroid adenoma associated (THADA), mRNA NM\_198557 Homo sapiens FLJ45645 protein (FLJ45645), mRNA

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NM_198559 Homo sapiens hypothetical gene supported by BC052750 (MGC50811), mRI
NM 198560 Homo sapiens li poma HMGIC fusion partner-like protein 4 (LOC375323), mR
NM_198562 Homo sapiens F LJ43654 protein (FLJ43654), mRNA
NM_198563 Homo sapiens Similar to RIKEN cDNA 1810038N08 gene (MGC52022), mRI
NM_198564 Homo sapiens F LJ44290 protein (FLJ44290), mRNA
NM 198565 Homo sapiens ELLP3030 (UNQ3030), mRNA
NM 198566 Homo sapiens FLJ32363 protein (FLJ32363), mRNA
NM 198567 Homo sapiens FLJ44216 protein (FLJ44216), mRNA
NM_198568 Home sapiens gap junction protein, beta 7 (GJB7), mRNA
NM 198569 Homo sapiens G protein-coupled receptor 126 (GPR126), mRNA
NM_198570 Homo sapiens PSST739 (UNQ739), mRNA
NM_198571 Homo sapiens FLJ39237 protein (FLJ39237), mRNA
NM_198572 Homo sapiens similar to Putative protein C21orf56 (MGC61633), mRNA
NM 198573 Homo sapiens GAAI470 (UNQ470), mRNA
NM 198577 Homo sapiens FLJ46361 protein (FLJ46361), mRNA
NM_198580 Homo sapiens solute carrier family 27 (fatty acid transporter), member 1 (SLI
NM 198581 Homo sapiens zinc finger CCCH type domain containing 6 (ZC3HDC6), mRN
NM 198582 Homo sapiens FLJ43374 protein (FLJ43374), mRNA
NM_198584 Homo sapiens carbonic anhydrase XIII (CA13), mRNA
NM_198585 Homo sapiens GLSR2492 (UNQ2492), mRNA
NM_198586 Homo sapiens NHL repeat containing 1 (NHLRC1), mRNA
NM_198587 Homo sapiens regulator of G-protein signalling 12 (RGS12), transcript varian
NM_198589 Homo sapiens basigin (OK blood group) (BSG), transcript variant 2, mRNA
NM_198590 Homo sapiens basigin (OK blood group) (BSG), transcript variant 3, mRNA
NM_198591 Homo sapiens basigin (OK blood group) (BSG), transcript variant 4, mRNA
NM_198593 Homo sapiens C1q and tumor necrosis factor related protein 1 (C1QTNF1), t
NM 198594 Homo sapiens C1g and tumor necrosis factor related protein 1 (C1QTNF1), r
NM_198595 Homo sapiens actin filament associated protein (AFAP), transcript variant 2,
NM_198596 Homo sapiens sulfatase 2 (SULF2), transcript variant 2, mRNA
NM_198597 Homo saplens SEC24 related gene family, member C (S. cerevisiae) (SEC24
NM_198679 Homo sapiens Rap quanine nucleotide exchange factor (GEF) 1 (RAPGEF1)
NM_198681 Homo sapiens putative NFkB activating protein (KIAA0720), transcript varian
NM 198682 Homo sapiens glycophorin E (GYPE), transcript variant 2, mRNA
NM 198686 Homo saplens RAB15, member RAS onocogene family (RAB15), mRNA
NM_198687 Homo sapiens keratin associated protein 10-4 (KRTAP10-4), mRNA
NM_198688 Homo sapiens keratin associated protein 10-6 (KRTAP10-6), mRNA
NM 198689 Homo sapiens keratin associated protein 10-7 (KRTAP10-7), mRNA
NM 198690 Homo sapiens keratin associated protein 10-9 (KRTAP10-9), mRNA
NM_198691 Homo sapiens keratin associated protein 10-1 (KRTAP10-1), mRNA
NM_198692 Homo sapiens keratin associated protein 10-11 (KRTAP10-11), mRNA
NM_198693 Homo sapiens keratin associated protein 10-2 (KRTAP10-2), mRNA
NM_198694 Homo sapiens keratin associated protein 10-5 (KRTAP10-5), mRNA
NM_198695 Homo sapiens keratin associated protein 10-8 (KRTAP10-8), mRNA
NM_198696 Homo sapiens keratin associated protein 10-3 (KRTAP10-3), mRNA
NM_198697 Homo sapiens keratin associated protein 12-3 (KRTAP12-3), mRNA
NM 198698 Homo sapiens keratin associated protein 12-4 (KRTAP12-4), mRNA
NM_198699 Homo sapiens keratin associated protein 10-12 (KRTAP10-12), mRNA
NM_198700 Homo sapiens CUG triplet repeat, RNA binding protein 1 (CUGBP1), transcri
NM 198704 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrir
NM_198705 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrip
NM 198706 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrit
NM_198707 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrip
NM_198708 Homo sapiens short-chain dehydrogenase/reductase 10 (SCDR10), transcrip
NM_198709 Homo sapiens a rylsulfatase B (ARSB), transcript variant 2, mRNA
NM 198712 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrij
NM 198713 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip
NM_198714 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip
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NM 198715 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrij NM\_198716 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrij NM\_198717 Homo saptens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip NM\_198718 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip NM\_198719 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip NM\_198720 Homo sapiens prostaglandin E receptor 3 (subtype EP3) (PTGER3), transcrip NM\_198721 Homo sapiens collagen, type XXV, alpha 1 (COL25A1), transcript variant 1, r NM\_198722 Homo sapiens amphotenn-induced gene and ORF 3 (AMIGO3), mRNA NM 198723 Homo sapiens transcription elongation factor A (SII), 2 (TCEA2), transcript ve NM\_198793 Homo sapiens CD47 antigen (Rh-related antigen, integrin-associated signal NM 198794 Homo saptens mitogen-activated protein kinase kinase kinase kinase 5 (MAF NM 198795 Homo sapiens tudor domain containing 1 (TDRD1), mRNA NM 198797 Homo sapiens prostaglandin E synthase (PTGES), transcript variant 2, mRN. NM\_198798 Homo sapiens ankyrin repeat domain 5 (ANKRD5), transcript variant 2, mRN NM\_198799 Homo sapiens breast carcinoma amplified sequence 4 (BCAS4), transcript vi NM\_198822 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NM\_198827 Homo saplens G protein-coupled receptor 133 (GPR133), mRNA NM\_198828 Homo sapi ens similar to microtubule associated testis specific serine/threoni NM\_198829 Homo sapiens ras-related C3 botulinum toxin substrate 1 (rho family, small C NM\_198830 Homo saplens ATP citrate lyase (ACLY), transcript variant 2, mRNA NM\_198833 Homo sapiens serine (or cysteine) proteinase Inhibitor, clade B (ovalbumin), NM\_198834 Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198835 Homo sapi ens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198836 Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198837 Homo saplens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198838 Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198839 Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), transcript va NM\_198841 Homo sapiens chromosome 9 open reading frame 10 opposite strand (C9orf NM\_198843 Homo saplens surfactant, pulmonary-associated protein B (SFTPB), transcrip NM\_198844 Homo sapiens zona pellucida binding protein 2 (ZPBP2), transcript variant 1. NM\_198845 Homo saplens sialic acid binding Ig-like lectin 6 (SIGLEC6), transcript varian NM\_198846 Homo saplens sialic acid binding Ig-like lectin 6 (SIGLEC6), transcript variant NM\_198847 Homo sapiens FLJ22794 protein (FLJ22794), transcript variant 2, mRNA NM 198849 Homo sapiens similar to seven in absentia 2 (LOC283514), mRNA NM 198850 Homo sapiens pleckstrin homology-like domain, family B, member 3 (PHLDE NM\_198851 Homo sapiens hypothetical protein LOC348645 (LOC348645), mRNA NM\_198853 Homo sapiens tripartite motif-containing 50C (TRIM50C), mRNA NM\_198855 Homo sapiens zinc finger protein 211 (ZNF211), transcript variant 2, mRNA NM\_198856 Homo sapiens CAP-binding protein complex interacting protein 1 (FLJ23588' NM\_198857 Homo sapiens similar to sodium- and chloride-dependent creatine transporte NM\_198859 Homo sapiens prickle-like 2 (Drosophila) (PRICKLE2), mRNA NM 198867 Homo saplens hypothetical protein MGC15677 (MGC15677), transcript varia NM 198868 Homo sapiens KIAA0676 protein (KIAA0676), transcript variant 1, mRNA NM\_198880 Homo sapiens FLJ20259 protein (FLJ20259), transcript variant 2, mRNA NM\_198881 Homo sapiens FLJ20298 protein (FLJ20298), transcript variant 2, mRNA NM\_198883 Homo saple ns metaxin 1 (MTX1), transcript variant 2, mRNA NM\_198887 Homo sapiens nucleoporin 43kDa (NUP43), transcript variant 1, mRNA NM\_198889 Homo sapiens ankyrin repeat domain 17 (ANKRD17), transcript variant 2, ml NM\_198890 Homo sapiens APG16 autophagy 16-like (S. cerevisiae) (APG16L), transcrip NM\_198892 Homo sapiens BMP2 inducible kinase (BMP2K), transcript variant 1, mRNA NM 198893 Homo sapiens zinc finger protein 160 (ZNF160), transcript variant 2, mRNA NM 198896 Homo sapiens RAB6A, member RAS oncogene family (RAB6A), transcript vi NM\_198897 Homo sapiens fibroblast growth factor (acidic) intracellular blnding protein (F NM\_198900 Homo sapiens formin-like 3 (FMNL3), transcript variant 2, mRNA NM\_198901 Homo sapiens sorcin (SRI), transcript variant 2, mRNA NM 198902 Homo sapiens transmembrane 4 superfamily member 8 (TM4SF8), transcrip-NM\_198903 Homo sapiens gamma-aminobutyric acid (GABA) A receptor, gamma 2 (GAE

NM 198904 Homo sapiens gamma-aminobutyric acid (GABA) A receptor, gamma 2 (GAE NM\_198907 Homo sapiens hypothetical protein LOC253982 (LOC253982), mRNA NM\_198920 Homo sapiens chromosome 6 open reading frame 157 (C6orf157), mRNA NM\_198923 Homo sapiens MAS-related GPR, member D (MRGPRD), mRNA NM 198924 Homo sapiens hypothetical protein MGC45477 (MGC45477), mRNA NM 198925 Homo saplens sema domain, immunoglobulin domain (lg), transmembrane c NM 198926 Homo sapiens hypothetical protein LOC55924 (LOC55924), transcript varian NM 198928 Homo sapiens interferon-inducible protein X (IFIX), transcript variant a2, mRI NM\_198929 Homo sapiens interferon-inducible protein X (IFIX), transcript variant b1, mRI NM 198930 Homo sapiens interferon-inducible protein X (IFIX), transcript variant b2, mRI NM 198935 Homo sapiens synovial sarcoma translocation gene on chromosome 18-like NM 198938 Homo sapiens prostaglandin E synthase 2 (PTGES2), transcript variant 2, m NM 198939 Homo sapiens prostaglandin E synthase 2 (PTGES2), transcript variant 3, m NM 198940 Homo sapiens prostaglandin E synthase 2 (PTGES2), transcript variant 4, m NM 198941 Homo sapiens tumor differentially expressed 1 (TDE1), transcript variant 2, n NM 198943 Homo sapiens CXYorf1-related protein (MGC52000), mRNA NM 198944 Homo sapiens olfactory receptor, family 7, subfamily C, member 1 (OR7C1), NM 198945 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM 198946 Homo saplens lipocalin 6 (LCN6), mRNA NM\_198947 Homo sapiens cancer-associated nucleoprotein (CANP), mRNA NM\_198948 Homo sapiens nudix (nucleoside diphosphate linked molety X)-type motif 1 (I NM\_198949 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 1 (I NM 198950 Homo sapiens nudix (nucleoside diphosphate linked moiety X)-type motif 1 (I NM\_198951 Homo saplens transglutaminase 2 (C polypeptide, protein-glutamine-gamma NM\_198952 Homo sapiens nudix (nucleoside diphosphate linked molety X)-type motif 1 (I NM 198953 Homo sapiens nudix (nucleoside diphosphate linked molety X)-type motif 1 (I NM\_198954 Homo sapiens nudlx (nucleoside diphosphate linked moiety X)-type motif 1 (I NM 198955 Homo saplens mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetyl-glucosa NM 198956 Homo saplens Sp8 transcription factor (SP8), transcript variant 2, mRNA NM 198963 Homo sapiens DEAH (Asp-Glu-Ala-Asp/His) box polypeptide 57 (DHX57), tra NM 198964 Homo sapiens parathyroid hormone-like hormone (PTHLH), transcript varian NM 198965 Homo saplens parathyrold hormone-like hormone (PTHLH), transcript varian NM 198966 Homo saplens parathyroid homone-like hormone (PTHLH), transcript variant NM 198968 Homo sapiens DAZ interacting protein 1 (DZIP1), mRNA NM 198969 Homo sapiens amino-terminal enhancer of split (AES), transcript variant 1, m NM 198970 Homo saplens amino-terminal enhancer of split (AES), transcript variant 3, m NM\_198971 Homo sapiens MBD2 (methyl-CpG-binding protein)-interacting zinc finger pro NM\_198973 Homo sapiens MAP kinase interacting serine/threonine kinase 1 (MKNK1), π NM\_198974 Homo saplens PTK9 protein tyrosine kinase 9 (PTK9), transcript variant 2, m NM 198976 Homo sapiens TH1-like (Drosophila) (TH1L), transcript variant 1, mRNA NM 198977 Homo sapiens Rho guanine nucleotide exchange factor (GEF) 1 (ARHGEF1) NM 198988 Homo sapiens leukocyte receptor cluster (LRC) member 9 (LENG9), mRNA NM 198989 Homo sapiens deleted in lymphocytic leukemia 7 (DLEU7), mRNA NM 198990 Homo sapiens N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase NM 198991 Homo sapiens potassium channel tetramerisation domain containing 1 (KCT NM\_198992 Homo sapiens synaptotagmin X (SYT10), mRNA NM 198993 Homo sapiens SH3 and cysteine rich domain 2 (STAC2), mRNA NM\_198994 Homo sapiens transglutaminase 6 (TGM6), mRNA NM\_198995 Homo sapiens chromosome 18 open reading frame 34 (C18orf34), mRNA NM\_198996 Homo sapiens membrane-associated phospholipase A1 beta (LOC375108), NM 198998 Homo sapiens aquaporin 12 (AQP12), mRNA NM 198999 Homo sapiens prestin (motor protein) (PRES), transcript variant a, mRNA NM 199000 Homo sapiens lipoma HMGIC fusion partner-like 3 (LHFPL3), mRNA

NM\_199001 Homo sapiens Similar to RIKEN doNA 2310002.115 gene (MGC59937), mRN MM\_199002 Homo sapiens Rho guanine nucleotide exchange factor (GEF) 1 (ARHGEF1) MM\_199003 Homo sapiens Rh2 Podnain containing, apoptosis associated profile in (TH. NM\_199004 Homo sapiens arrestin, beta 2 (ARRB2), transcript variant 2, mRNA

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NM 199005 Homo sapiens zinc finger protein 322B (ZNF322B), mRNA NM 199006 Homo sapiens contistation (CORT), transcript variant 3, mRNA NM\_199037 Homo sapiens sodium channel, voltage-gated, type I, beta (SCN1B), transcri NM 199039 Homo sapiens kelch-like 5 (Drosophila) (KLHL5), transcript variant b, mRNA NM 199040 Homo saplens nudix (nu cleoside diphosphate linked moiety X)-type motif 4 (I NM\_199043 Homo sapiens chromosome 14 open reading frame 102 (C14orf102), transci NM\_199044 Homo sapiens MGC229 60 gene (MGC22960), mRNA NM\_199046 Homo sapiens testis/pro-state/placenta-expressed protein (TEPP), transcript NM\_199047 Homo saplens TATA box binding protein like 2 (TBPL2), mRNA NM\_199050 Homo sapiens chromosome 21 open reading frame 25 (C21orf25), mRNA NM\_199051 Homo sapiens DBCCR1-like (DBCCR1L), mRNA NM\_199052 Homo sapiens chromosome 20 open reading frame 7 (C20orf7), transcript va NM 199053 Homo saplens FLJ12716 protein (FLJ12716), transcript variant 2, mRNA NM\_199054 Homo sapiens MAP kinase-interacting serine/threonine kinase 2 (MKNK2), n NM\_199069 Homo sapiens nuclear protein E3-3 (DKFZP564J0123), transcript variant 1, r NM\_199070 Homo sapiens nuclear protein E3-3 (DKFZP564J0123), transcript variant 2, r NM\_199071 Homo sapiens chromosome 21 open reading frame 58 (C21orf58), transcript NM 199072 Homo sapiens I-mfa dornain-containing protein (HIC), mRNA NM\_199073 Homo sapiens nuclear protein E3-3 (DKFZP564J0123), transcript variant 3, r NM\_199074 Homo sapiens nuclear protein E3-3 (DKFZP564J0123), transcript variant 4, r NM\_199075 Homo sapiens CBF1 interacting corepressor (CIR), transcript variant 2, mRN NM 199076 Homo saplens cyclin M2 (CNNM2), transcript variant 2, mRNA NM\_199077 Homo sapiens cyclin M2 (CNNM2), transcript variant 3, mRNA NM\_199078 Homo sapiens cyclin M3 (CNNM3), transcript variant 2, mRNA NM\_199121 Homo sapiens von Willebrand factor A domain-related protein (WARP), trans NM\_199122 Homo sapiens transforming growth factor beta regulator 4 (TBRG4), transcrij NM\_199123 Homo saplens chromosome 14 open reading frame 154 (C14orf154), transcr NM 199124 Homo sapiens hypothetical protein FLJ23554 (FLJ23554), transcript variant : NM\_199126 Homo sapiens zinc finger protein 585A (ZNF585A), transcript variant 2, mRN NM\_199127 Homo sapiens gamma-g lutamyltransferase-like 4 (GGTL4), transcript variant NM\_199129 Homo sapiens ubiquitin-conjugating enzyme variant Kua (Kua), mRNA NM\_199131 Homo saplens ventral arterior homeobox 1 (VAX1), mRNA NM 199133 Homo sapiens hypothetical protein LOC134145 (LOC134145), mRNA NM 199135 Homo sapiens FOXD4-like 2 (FOXD4L2), mRNA NM\_199136 Homo saplens hypothetical protein MGC72075 (MGC72075), mRNA NM 199138 Homo sapiens hypothetical protein FLJ25477 (FLJ25477), transcript variant; NM\_199139 Homo sapiens XIAP associated factor-1 (HSXIAPAF1), transcript variant 2, n NM\_199141 Homo sapiens coactivator-associated arginine methyltransferase 1 (CARM1) NM\_199144 Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 (UBE2V1), transcri NM 199160 Homo sapiens LIM homeobox 6 (LHX6), transcript variant 2, mRNA NM\_199161 Homo sapiens serum arraylold A1 (SAA1), transcript variant 2, mRNA NM\_199162 Homo sapiens ADP-ribo sylhydrolase like 1 (ADPRHL1), transcript variant 2, i NM\_199163 Homo sapiens CXYorf1-related protein (FLJ25222), mRNA NM 199165 Homo sapiens adenylosuccinate synthase like 1 (ADSSL1), transcript variant NM\_199166 Homo sapiens aminolevulinate, delta-, synthase 1 (ALAS1), transcript varian NM\_199167 Homo sapiens clusterin-like 1 (retinal) (CLUL1), transcript variant 2, mRNA NM\_199168 Homo sapiens chemokin e (C-X-C motif) ligand 12 (stromal cell-derived factor NM\_199169 Homo sapiens transmembrane, prostate androgen induced RNA (TMEPAI), t NM\_199170 Homo sapiens transmembrane, prostate androgen induced RNA (TMEPAI), t NM\_199171 Homo sapiens transmembrane, prostate androgen induced RNA (TMEPAI), 1 NM 199173 Homo sapiens bone gamma-carboxyglutamate (gla) protein (osteocalcin) (BC NM 199175 Homo sapiens chromosome 21 open reading frame 123 (C21orf123), mRNA NM\_199176 Homo sapiens mitochon drial ribosome recycling factor (MRRF), transcript va NM\_199177 Homo sapiens mitochon drial ribosome recycling factor (MRRF), transcript va NM\_199179 Homo sapiens kin of IRRE like 2 (Drosophila) (KIRREL2), transcript variant 2 NM 199180 Homo sapiens kin of IRRE like 2 (Drosophila) (KIRREL2), transcript variant 3

NM\_199181 Homo sapiens FLJ4467O protein (FLJ44670), mRNA

NM 199182 Homo sapiens hLAT1-3TM (IMAA), mRNA NM\_199183 Homo sapiens testis serine protease 5 (TESSP5), mRNA NM\_199184 Homo sapiens chromosome 6 open reading frame 108 (C6orf108), transcript NM\_199185 Homo sapiens nucleophosmin (nucleolar phosphoprotein B23, numatrin) (NF NM\_199186 Home sapiens 2,3-bisphosphoglycerate mutase (BPGM), transcript variant 2 NM 199187 Homo sapiens keratin 18 (KRT18), transcript variant 2, mRNA NM 199188 Homo sapiens c-Mpl binding protein (LOC113251), transcript variant 2, mRN NM 199190 Homo sapiens c-Mpl binding protein (LOC113251), transcript variant 3, mRN NM 199191 Homo sapiens brain and reproductive organ-expressed (TNFRSF1A modulal NM 199192 Homo sapiens brain and reproductive organ-expressed (TNFRSF1A modulal NM\_199193 Homo sapiens brain and reproductive organ-expressed (TNFRSF1A modulal NM 199194 Homo sapiens brain and reproductive organ-expressed (TNFRSF1A modulal NM 199202 Homo sapiens Theg homolog (mouse) (THEG), transcript variant 2, mRNA NM\_199203 Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 (Kua-UEV), transcr NM 199204 Homo sapiens dehydrogenase/reductase (SDR family) member 9 (DHRS9), NM\_199205 Homo sapiens p30 DBC protein (DBC-1), transcript variant 2, mRNA NM\_199206 Homo sapiens T-cell leukemia/lymphoma 1B (TCL1B), transcript variant 2, m NM 199227 Homo sapiens methionine aminopeptidase 1D (MAP1D), mRNA NM 199228 Homo saplens thrombopoietin (myeloproliferative leukemia virus oncogene li NM 199229 Homo sapiens ribulose-5-phosphate-3-epimerase (RPE), transcript variant 1. NM\_199231 Homo sapiens glial cell derived neurotrophic factor (GDNF), transcript varian NM\_199232 Homo sapiens allantoicase (ALLC), transcript variant 2, mRNA NM 199234 Homo sapiens glial cell derived neurotrophic factor (GDNF), transcript varian NM\_199235 Homo saplens collectin sub-family member 11 (COLEC11), transcript variant NM\_199242 Homo sapiens unc-13 homolog D (C. elegans) (UNC13D), mRNA NM 199243 Homo sapiens G protein-coupled receptor 150 (GPR150), mRNA NM 199244 Homo sapiens forkhead box protein D4b (FOXD4b), mRNA NM 199245 Homo sapiens vesicle-associated membrane protein 1 (synaptobrevin 1) (VA NM\_199246 Homo sapiens cyclin G1 (CCNG1), transcript variant 2, mRNA Homo sapiens calcium channel, voltage-dependent, beta 1 subunit (CACNB NM 199247 NM 199248 Homo sapiens calcium channel, voltage-dependent, beta 1 subunit (CACNB: NM\_199249 Homo sapiens multidrug resistance-related protein (MGC13170), mRNA NM\_199250 Homo saplens multidrug resistance-related protein (MGC13170), mRNA NM\_199254 Homo sapiens transmembrane phospholnositide 3-phosphatase and tensin I NM\_199255 Homo sapiens transmembrane phosphoinositide 3-phosphatase and tensin i NM\_199259 Homo sapiens transmembrane phosphatase with tensin homology (TPTE), tr NM\_199260 Homo saplens transmembrane phosphatase with tensin homology (TPTE), tr NM\_199261 Homo saplens transmembrane phosphatase with tensin homology (TPTE), tr NM 199262 Homo sapiens Sp6 transcription factor (SP6), mRNA NM 199263 Homo sapiens thrombospondin, type I, domain containing 1 (THSD1), transc NM 199265 Homo saplens thrombospondin, type I, domain containing 3 (THSD3), transc NM 199280 Homo sapiens similar to RIKEN cDNA 4632412N22 gene (LOC165186), mR NM\_199282 Homo sapiens likely ortholog of rat CIN85-associated multi-domain containin NM\_199285 Homo sapiens hypothetical LOC284338 (MGC70924), mRNA NM 199286 Homo sapiens STELLA mRNA (LOC338759), mRNA NM\_199290 Homo sapiens alpha-NAC protein (MGC71999), mRNA NM\_199292 Homo sapiens tyrosine hydroxylase (TH), transcript variant 1, mRNA NM 199293 Homo sapiens tyrosine hydroxylase (TH), transcript variant 3, mRNA NM 199294 Homo sapiens cortistatin (CORT), transcript variant 4, mRNA NM 199295 Homo sapiens cortistatin (CORT), transcript variant 5, mRNA NM 199296 Homo sapiens thrombospondin, type I, domain containing 3 (THSD3), transc NM 199297 Homo sapiens thymocyte protein thy28 (THY28), transcript variant 2, mRNA NM 199298 Homo sapiens thymocyte protein thy28 (THY28), transcript variant 3, mRNA NM 199320 Homo sapiens PHD protein Jade-1 (JADE1), transcript variant L, mRNA

NM\_199321 Homo sapiens zona pellucida binding protein 2 (ZPBP2), transcript variant 2, NM\_199324 Homo sapiens HIV-1 induced protein HIN-1 (HSHIN1), transcript variant 1, mM\_199326 Homo sapiens protein phosphatase 2A 48 KDa regulatory subunit (PR48), tr

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NM 199327 Homo sapiens sprouty homolog 1, antagonist of FGF signaling (Drosophila) NM 199328 Homo sapiens claudin 8 (CLD N8), mRNA NM 199329 Homo sapiens solute carrier farmily 43, member 3 (SLC43A3), mRNA NM 199330 Homo sapiens homer homologi 2 (Drosophila) (HOMER2), transcript variant 2 NM 199331 Homo sapiens homer homolog 2 (Drosophila) (HOMER2), transcript variant 3 NM 199332 Homo sapiens homer homolog 2 (Drosophila) (HOMER2), transcript variant 4 NM 199334 Homo sapiens thyroid hormon e receptor, alpha (erythroblastic leukemia viral NM 199335 Homo sapiens FYN binding protein (FYB-120/130) (FYB), mRNA NM\_199336 Homo sapiens hypothetical protein DKFZp434N062 (DKFZp434N062), mRN. NM\_199337 Homo sapiens similar to RIKEN cDNA 1810059G22 (LOC374395), mRNA NM 199338 Homo sapiens FLJ35171 protein (FLJ35171), mRNA NM 199339 Homo sapiens hypothetical protein LOC374768 (LOC374768), mRNA NM 199341 Homo sapiens hypothetical protein LOC374920 (LOC374920), mRNA NM 199342 Homo sapiens hypothetical protein LOC374969 (LOC374969), mRNA NM 199343 Homo sapiens FLJ90637 protein (FLJ90637), mRNA NM 199344 Homo sapiens hypothetical protein LOC375035 (LOC375035), mRNA NM 199345 Homo sapiens similar to phos phatidylinositol 4-kinase alpha (LOC375133), n NM 199346 Homo sapiens profilin family, member 4 (PFN4), mRNA NM 199348 Homo sapiens protocadherin protein CDHJ (CDHJ), transcript variant 2, mRt NM 199349 Homo saplens kielin-like (LOC375616), mRNA NM\_199350 Homo sapiens hypothetical protein LOC375759 (LOC375759), mRNA NM 199351 Homo sapiens chromosome 1 open reading frame 32 (C1orf32), mRNA NM 199352 Homo sapiens putative UST1-like organic anion transporter (LOC387601), m NM 199353 Homo sapiens proline-rich protein BstNI subfamily 1 (PRB1), transcript varial NM\_199354 Homo sapiens proline-rich protein BstNI subfamily 1 (PRB1), transcript variai NM\_199355 Homo sapiens a disintegrin-like and metalloprotease (reprolysin type) with th NM 199356 Homo sapiens thrombopoietin (myeloproliferative leukemia virus oncogene li NM 199357 Homo sapiens similar to human GTPase-activating protein (ARHGAP11A), rr NM 199358 Homo saplens forkhead box D4 like 3 (FOXD4L3), mRNA NM 199359 Homo sapiens tumor protein D52-like 2 (TPD52L2), transcript variant 6, mRN NM 199360 Home sapiens tumor protein D52-like 2 (TPD52L2), transcript variant 1, mRN NM 199361 Homo sapiens tumor protein D52-like 2 (TPD52L2), transcript variant 2, mRN NM\_199362 Homo saplens tumor protein D52-like 2 (TPD52L2), transcript variant 3, mRN NM 199363 Homo saplens tumor protein D52-like 2 (TPD52L2), transcript variant 4, mRN NM\_199367 Homo sapiens spastic paraplegia 7, paraplegin (pure and complicated autos NM\_199368 Homo sapiens transient receptor potential cation channel, subfamily C, mem NM\_199413 Homo sapiens protein regulator of cytokinesis 1 (PRC1), transcript variant 2, NM\_199414 Homo sapiens protein regulator of cytokinesis 1 (PRC1), transcript variant 3, NM 199415 Homo sapiens likely ortholog of mouse ubiquitin conjugating enzyme 7 intera NM 199416 Homo sapiens papillary renal cell carcinoma (translocation-associated) (PRC NM 199417 Homo sapiens nuclear protein E3-3 (DKFZP564J0123), transcript variant 5, I NM\_199418 Homo sapiens prolylcarboxyp eptidase (anglotensinase C) (PRCP), transcript NM 199420 Homo sapiens polymerase (DNA directed), theta (POLQ), transcript variant 2 NM 199421 Homo sapiens suppressor of cytokine signaling 4 (SOCS4), transcript variant NM\_199423 Homo saplens WW domain containing E3 ubiquitin protein ligase 2 (WWP2) NM 199424 Homo sapiens WW domain containing E3 ublquitin protein ligase 2 (WWP2) NM\_199425 Homo sapiens visual system homeobox 1 homolog, CHX10-like (zebrafish) ( NM 199426 Homo sapiens zinc finger protein 64 homolog (mouse) (ZFP64), transcript va NM\_199427 Homo sapiens zinc finger protein 64 homolog (mouse) (ZFP64), transcript va NM\_199436 Homo sapiens spastic paraplegia 4 (autosomal dominant; spastin) (SPG4), ti NM 199437 Homo sapiens PR domain containing 10 (PRDM10), transcript variant 2, mRI NM 199438 Homo sapiens PR domain containing 10 (PRDM10), transcript variant 3, mRI NM 199439 Homo sapiens PR domain containing 10 (PRDM10), transcript variant 4, mRI NM 199440 Homo sapiens heat shock 60kDa protein 1 (chaperonin) (HSPD1), nuclear gr NM 199441 Homo sapiens zinc finger protein 334 (ZNF334), transcript variant 2, mRNA NM 199442 Homo sapiens coatomer protein complex, subunit epsilon (COPE), transcript

NM 199443 Homo sapiens ubiquitin specific protease 4 (proto-oncogene) (USP4), transc

NM 199444 Homo sapiens coatomer protein complex, subunit epsilon (COPE), transcript NM 199450 Homo sapiens zinc finger protein 365 (ZNF365), transcript variant B, mRNA NM\_199451 Homo sapiens zinc finger protein 365 (ZNF365), transcript variant C, mRNA NM 199452 Homo sapiens zinc finger protein 365 (ZNF365), transcript variant D, mRNA NM 199453 Homo sapiens 5-hydroxytryotamine (serotonin) recentor 4 (HTR4), transcript NM 199454 Homo sapiens PR domain containing 16 (PRDM16), transcript variant 2, mRI NM\_199456 Homo sapiens testis/prostate/placenta-expressed protein (TEPP), transcript ' NM 199459 Homo sapiens chromosome 10 open reading frame 71 (C10orf71), mRNA NM 199460 Homo sapiens hypothetical protein LOC283439 (LOC283439), mRNA NM 199461 Homo sapiens nanos homolog 1 (Drosophila) (NANOS1), mRNA NM 199462 Homo sapiens receptor interacting protein kinase 5 (RIPK5), transcript variar NM 199464 Homo sapiens potassium channel regulator (KCNRG), mRNA NM 199478 Homo sapiens proteoli pid protein 1 (Pelizaeus-Merzbacher disease, spastic) NM 199482 Homo saniens preimplantation protein 3 (PREI3), transcript variant 2, mRNA NM\_199483 Homo sapiens chromosome 20 open reading frame 24 (C20orf24), transcript NM\_199484 Homo sapiens chromosome 20 open reading frame 24 (C20orf24), transcript NM\_199485 Homo sapiens chromosome 20 open reading frame 24 (C20orf24), transcript NM\_199487 Homo sapiens chromosome 20 open reading frame 44 (C20orf44), transcript NM 199511 Homo sapiens steroid sensitive gene 1 (URB), transcript variant 1, mRNA NM 199512 Homo sapiens steroid sensitive gene 1 (URB), transcript variant 2, mRNA NM 199513 Homo sapiens chromosome 20 open reading frame 44 (C20orf44), transcript NM 201222 Homo sapiens melanoma antigen, family D, 2 (MAGED2), transcript variant 3 NM 201224 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 47 (DDX47), transc NM 201252 Homo sapiens aflatoxin B1 aldehyde reductase 3 (AFAR3), mRNA NM 201253 Homo saplens crumbs homolog 1 (Drosophila) (CRB1), transcript variant 2, r NM\_201259 Homo sapiens homolog of yeast TIM14 (TIM14), transcript variant 2, mRNA NM 201260 Home sapiens homolog of yeast TIM14 (TIM14), transcript variant 3, mRNA NM 201261 Home sapiens homolog of yeast TIM14 (TIM14), transcript variant 4, mRNA NM 201262 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 12 (DNAJC12). NM 201263 Homo saplens tryptophanyl tRNA synthetase 2 (mltochondrial) (WARS2), nu NM 201264 Homo saplens neuropilin 2 (NRP2), transcript variant 6, mRNA NM 201265 Homo sapiens bone marrow stromal cell-derived ubiquitin-like (BMSC-UbP), NM 201266 Homo sapiens neuropilin 2 (NRP2), transcript variant 1, mRNA NM 201267 Homo saplens neuropilin 2 (NRP2), transcript variant 5, mRNA NM\_201268 Homo sapiens membrane-bound transcription factor protease, site 1 (MBTP§ NM\_201269 Homo sapiens zinc finger motif enhancer binding protein 2 (Zep-2), transcrip NM 201274 Homo sapiens myosin phosphatase-Rho interacting protein (M-RIP), mRNA NM 201277 Homo sapiens calponin 2 (CNN2), transcript variant 2, mRNA NM 201278 Homo sapiens myotubularin related protein 2 (MTMR2), transcript variant 2. I NM 201279 Homo sapiens neuropilin 2 (NRP2), transcript variant 3, mRNA NM 201280 Homo sapiens muted homolog (mouse) (MUTED), mRNA NM 201281 Homo saplens myotubularin related protein 2 (MTMR2), transcript variant 3, i NM 201282 Homo sapiens epidermal growth factor receptor (erythroblastic leukemia vira NM 201283 Homo sapiens epidermal growth factor receptor (erythroblastic leukemia vira NM\_201284 Homo sapiens epidermal growth factor receptor (erythroblastic leukemia vira NM\_201286 Homo sapiens ubiquitin specific protease 51 (USP51), mRNA NM\_201348 Homo sapiens proline arginine-rich end leucine-rich repeat protein (PRELP), NM 201349 Homo sapiens docking protein 2, 56kDa (DOK2), transcript variant 2, mRNA NM 201377 Homo sapiens cancer susceptibility candidate 2 (CASC2), mRNA NM\_201378 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201379 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM\_201380 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201381 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201382 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201383 Homo sapiens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201384 Homo saplens plectin 1, intermediate filament binding protein 500kDa (PLEC NM 201397 Homo sapiens glutathione peroxidase 1 (GPX1), transcript variant 2, mRNA

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NM 201398 Homo sapiens FAD-synthetase (PP591), transcript variant 2, mRNA NM 201399 Homo sapiens DPH2-like 2 (S. cerevisiae) (DPH2L2), transcript variant 2, mF NM\_201400 Homo sapiens hypothetical protein SB153 (SB153), transcript variant 1, mRN NM\_201402 Homo sapiens deubiquitinating enzyme 3 (DUB3), mRNA NM\_201403 Homo sapiens MOB1, Mps One Bindler kinase activator-like 2C (yeast) (MOE NM\_201412 Homo sapiens LUC7-like (S. cerevisiae) (LUC7L), transcript variant 2, mRNA NM\_201413 Homo saplens amyloid beta (A4) pre cursor protein (protease nexin-II, Alzheii NM\_201414 Homo sapiens amyloid beta (A4) pre cursor protein (protease nexin-II, Alzheii NM\_201428 Homo sapiens reticulon 3 (RTN3), transcript variant 2, mRNA NM\_201429 Homo sapiens reticulon 3 (RTN3), transcript variant 3, mRNA NM\_201430 Homo sapiens reticulon 3 (RTN3), transcript variant 4, mRNA NM 201431 Homo sapiens Ras association (RalGDS/AF-6) domain family 6 (RASSF6), to NM 201432 Homo sapiens growth arrest-specific 7 (GAS7), transcript variant b, mRNA NM 201433 Homo sapiens growth arrest-specific 7 (GAS7), transcript variant c, mRNA NM\_201434 Homo sapiens RAB5C, member RAS oncogene family (RAB5C), transcript v. NM\_201435 Homo sapiens testis-specific protein TSP-NY (TSP-NY), transcript variant 2. NM\_201436 Homo sapiens H2A histone family, member V (H2AFV), transcript variant 3, I NM\_201437 Homo sapiens transcription elongation factor A (SII), 1 (TCEA1), transcript ve NM\_201438 Homo saplens periphilin 1 (PPHLN1), transcript variant 5, mRNA NM\_201439 Homo sapiens periphilin 1 (PPHLN1), transcript variant 3, mRNA NM\_201440 Homo sapiens periphilin 1 (PPHLN1), transcript variant 4, mRNA NM\_201441 Homo sapiens TEA domain family member 4 (TEAD4), transcript variant 2, rr NM 201442 Homo saplens complement component 1, s subcomponent (C1S), transcript NM\_201443 Homo saplens TEA domain family member 4 (TEAD4), transcript variant 3, n NM\_201444 Homo sapiens diacylglycerol kinase, alpha 80kDa (DGKA), transcript variant NM 201445 Homo sapiens diacylglycerol kinase, alpha 80kDa (DGKA), transcript variant NM 201446 Homo saplens EGF-like-domain, multiple 7 (EGFL7), transcript variant 2, mR NM\_201453 Homo sapiens dopamine responsive protein (LOC220869), mRNA NM\_201515 Homo sapiens periphilin 1 (PPHLN1), transcript variant 2, mRNA NM\_201516 Homo sapiens H2A histone family, member V (H2AFV), transcript variant 4, I NM\_201517 Homo saplens H2A histone family, member V (H2AFV), transcript variant 5, I NM\_201520 Homo sapiens similar to 1810012H11Rik (FLJ40217), mRNA NM\_201521 Homo sapiens kinesin-like 8 (KNSL8), transcript variant 1, mRNA NM 201522 Homo sapiens kinesin-like 8 (KNSL8), transcript variant 2, mRNA NM 201523 Homo sapiens kinesin-like 8 (KNSL8), transcript variant 3, mRNA NM 201524 Homo sapiens G protein-coupled receptor 56 (GPR56), transcript variant 2, r NM 201525 Homo sapiens G protein-coupled receptor 56 (GPR56), transcript variant 3, r NM\_201526 Homo sapiens immunoglobulin superfamily containing leucine-rich repeat (IS NM\_201532 Homo sapiens diacylglycerol kinase, zeta 104kDa (DGKZ), transcript variant NM\_201533 Homo sapiens diacylglycerol kinase, zeta 104kDa (DGKZ), transcript variant NM\_201535 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 1, mRNA NM\_201536 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 3, mRNA NM\_201537 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 4, mRNA NM\_201538 Homo saplens NDRG family member 2 (NDRG2), transcript variant 5, mRNA NM\_201539 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 6, mRNA NM\_201540 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 7, mRNA NM 201541 Homo sapiens NDRG family member 2 (NDRG2), transcript variant 8, mRNA NM 201542 Homo sapiens mediator of RNA polymerase II transcription, subunit 8 homole NM 201543 Homo sapiens lectin, galactoside-binding, soluble, 8 (galectin 8) (LGALS8), t NM 201544 Homo sapiens lectin, galactoside-binding, soluble, 8 (galectin 8) (LGALS8), t NM\_201545 Homo sapiens lectin, galactoside-binding, soluble, 8 (galectin 8) (LGALS8), t NM\_201546 Homo sapiens hypothetical protein LOC200008 (LOC200008), mRNA NM\_201548 Homo sapiens retinitis pigmentosa 26 (autosomal recessive) (RP26), mRNA NM\_201550 Homo sapiens leucine rich repeat corntaining 10 (LRRC10), mRNA NM\_201552 Homo sapiens fibrinogen-like 1 (FGL1), transcript variant 3, mRNA NM\_201553 Homo sapiens fibrinogen-like 1 (FGL1), transcript variant 4, mRNA

NM\_201554 Homo sapiens diacylglycerol kinase, alpha 80kDa (DGKA), transcript variant

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NM\_201555 Homo sapiens four and a half LIM clomains 2 (FHL2), transcript variant 2, mF Homo sapiens four and a half LIM clomains 2 (FHL2), transcript variant 3, mF NM 201556 NM 201557 Homo saciens four and a half LIM domains 2 (FHL2), transcript variant 4, mF NM 201559 Homo sapiens forkhead box O3A (FOXO3A), transcript variant 2, mRNA NM 201563 Homo sapiens Fc fragment of IgG, low affinity IIc, receptor for (CD32) (FCGF NM 201564 Homo sapiens chromosome 10 open reading frame 94 (C10orf94), mRNA NM\_201565 Homo sapiens hypothetical gene supported by BC039313 (LOC284861), mR NM\_201566 Homo sapiens solute carrier family 16 (monocarboxylic acid transporters), me NM 201567 Homo sapiens cell division cycle 25A (CDC25A), transcript variant 2, mRNA NM 201568 Homo sapiens chromosome 1 open reading frame 16 (C1orf16), transcript vs NM\_201569 Homo sapiens chromosome 1 open reading frame 16 (C1orf16), transcript vs NM\_201570 Homo sapiens calcium channel, voltage-dependent, beta 2 subunit (CACNB) NM\_201571 Homo sapiens calcium channel, voltage-dependent, beta 2 subunit (CACNB; NM 201572 Homo sapiens calcium channel, voltage-dependent, beta 2 subunit (CACNB) NM 201574 Homo saciens solute carrier family 4, anion exchanger, member 3 (SLC4A3) NM 201575 Homo sapiens seizure related 6 hormolog (mouse)-like 2 (SEZ6L2), mRNA NM 201589 Homo sapiens v-maf musculoapone urotic fibrosarcoma oncogene homolog / NM 201590 Homo sapiens calcium channel, voltage-dependent, beta 2 subunit (CACNB) NM 201591 Homo sapiens glycoprotein M6A (GPM6A), transcript variant 2, mRNA NM 201592 Homo sapiens glycoprotein M6A (GPM6A), transcript variant 3, mRNA NM\_201593 Homo sapiens calcium channel, voltage-dependent, beta 2 subunit (CACNB) NM\_201594 Homo sapiens similar to B-cell linker; B cell linker protein (LOC284948), trans NM\_201595 Homo sapiens general transcription factor IIA, 1, 19/37kDa (GTF2A1), transc NM\_201596 Homo saplens calcium channel, voltage-dependent, beta 2 subunit (CACNB; NM\_201597 Homo saplens calcium channel, voltage-dependent, beta 2 subunit (CACNB) NM 201598 Homo saplens hypothetical protein SB153 (SB153), transcript variant 2, mRN NM 201599 Homo sapiens zinc finger protein 261 (ZNF261), transcript variant 2, mRNA NM 201612 Homo sapiens IKK Interacting protein (IKIP), transcript variant 2, mRNA NM\_201613 Homo sapiens IKK interacting protein (IKIP), transcript variant 3.1, mRNA NM 201614 Homo saplens IKK interacting protein (IKIP), transcript variant 3.2, mRNA NM 201623 Homo sapiens myeloid inhibitory C-type lectin-like receptor (MICL), transcript NM 201624 Homo sapiens ubiquitin specific protease 33 (USP33), transcript variant 2, m NM\_201625 Homo sapiens myeloid inhibitory C-type lectin-like receptor (MICL), transcript NM\_201626 Homo sapiens ubiquitin specific protease 33 (USP33), transcript variant 3, m NM 201627 Home saciens tripartite motif-containing 41 (TRIM41), transcript variant 2, ml NM 201628 Homo saciens hypothetical protein FLJ43806 (FLJ43806), mRNA NM 201629 Homo saplens tight junction protein 2 (zona occludens 2) (TJP2), transcript v NM 201630 Homo saplens leucine rich repeat neuronal 5 (LRRN5), transcript variant 2, n NM\_201631 Homo sapiens transglutaminase 5 (TGM5), transcript variant 1, mRNA NM\_201632 Homo sapiens transcription factor 7 (T-cell specific, HMG-box) (TCF7), transcription NM 201633 Homo saplens transcription factor 7 (T-cell specific, HMG-box) (TCF7), trans-NM\_201634 Homo sapiens transcription factor 7 (T-cell specific, HMG-box) (TCF7), trans-NM 201636 Home sapiens thromboxane A2 receptor (TBXA2R), transcript variant 1, mRt NM 201647 Home sapiens STAM binding protein (STAMBP), transcript variant 2, mRNA NM 201648 Homo saplens glycine-N-acyltransfer ase (GLYAT), nuclear gene encoding m NM 201649 Homo sapiens solute carrier family 6 (neurotransmitter transporter, glycine), I NM 201650 Homo sapiens B7 gene (B7), transcript variant 1, mRNA NM 201651 Homo sapiens solute camer family 28 (sodium-coupled nucleoside transports NM 201653 Homo sapiens eosinophil chemotactic cytokine (CHIA), mRNA NM\_201994 Homo sapiens vesicle-associated membrane protein 4 (VAMP4), transcript v NM 201995 Homo sapiens splicing factor 1 (SF1), transcript variant 2, mRNA NM 201997 Homo sapiens splicing factor 1 (SF1), transcript variant 4, mRNA NM 201998 Homo sapiens splicing factor 1 (SF1), transcript variant 3, mRNA NM 201999 Home saplens E74-like factor 2 (ets clomain transcription factor) (ELF2), tran NM 202000 Homo sapiens SA hypertension-associated homolog (rat) (SAH), transcript v. NM 202001 Homo sapiens excision repair cross-complementing rodent repair deficiency, NM 202002 Homo sapiens forkhead box M1 (FOXM1), transcript variant 1, mRNA

NM 202003 Homo sapiens forkhead box M1 (FOXM1), transcript variant 3, mRNA NM 202004 Homo sapiens hemochromatosis type 2 (juvenile) (HFE2), transcript variant ( NM 202467 Homo sapiens regulator of G-protein signalling 19 interacting protein 1 (RGS NM\_202468 Homo sapiens regulator of G-protein signalling 19 interacting protein 1 (RGS NM 202469 Homo sapiens regulator of G-protein signalling 19 interacting protein 1 (RGS NM\_202470 Homo sapiens regulator of G-protein signalling 19 interacting protein 1 (RGS NM\_202494 Homo sapiens regulator of G-protein signalling 19 interacting protein 1 (RGS NM\_202758 Homo sapiens rTS beta protein (HSRTSBETA), transcript variant 1, mRNA NM\_203281 Homo sapiens BMX non-receptor tyrosine kinase (BMX), mRNA NM\_203282 Homo sapiens zinc finger protein 539 (ZNF539), mRNA NM\_203283 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NM\_203284 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NM\_203285 Homo sapiens poliovirus receptor-related 1 (herpesvirus entry mediator C; ne NM\_203286 Homo sapiens poliovirus receptor-related 1 (herpesvirus entry mediator C; ne NM\_203287 Homo sapiens pregnancy specific beta-1-glycoprotein 11 (PSG11), transcript NM\_203288 Homo sapiens retinitis pigmentosa 9 (autosomal dominant) (RP9), mRNA NM\_203289 Homo sapiens POU domain, class 5, transcription factor 1 (POU5F1), transc NM\_203290 Homo sapiens polymerase (RNA) I polypeptide C, 30kDa (POLR1C), transcr NM\_203291 Homo sapiens retinoblastoma binding protein 8 (RBBP8), transcript variant 2 NM\_203292 Homo sapiens retinoblastoma binding protein 8 (RBBP8), transcript variant 3 NM 203293 Homo sapiens tripartite motif-containing 7 (TRIM7), transcript variant 1, mRN NM 203294 Homo sapiens tripartite motif-containing 7 (TRIM7), transcript variant 5, mRN NM\_203295 Homo sapiens tripartite motif-containing 7 (TRIM7), transcript variant 4, mRN NM\_203296 Homo sapiens tripartite motif-containing 7 (TRIM7), transcript variant 3, mRN NM\_203297 Homo sapiens tripartite motif-containing 7 (TRIM7), transcript variant 2, mRN NM\_203298 Homo sapiens coiled-coil-helix-coiled-coil-helix domain containing 1 (CHCHE NM\_203299 Homo sapiens hypothetical protein MGC41945 (MGC41945), mRNA NM\_203301 Homo sapiens F-box protein 33 (FBXO33), mRNA NM\_203302 Homo sapiens similar to RPL23AP7 protein (MGC70863), transcript variant 2 NM\_203303 Homo sapiens cellular nucleic acid blinding protein-like (LOC389874), mRNA NM 203304 Home sapiens and finger and KH domain containing 1 (RKHD1), mRNA NM 203305 Homo sapiens hypothetical protein MGC50853 (MGC50853), mRNA NM 203306 Homo sapiens hypothetical protein MGC39606 (MGC39606), mRNA NM 203307 Homo sapiens hypothetical protein MGC35402 (MGC35402), mRNA NM\_203308 Homo saplens ribosomal protein L13A-like (MGC34774), mRNA NM\_203309 Homo sapiens hypothetical MGC48595 (MGC48595), mRNA NM\_203311 Homo sapiens similar to Taxol resistant associated protein 3 (TRAG-3) (LOC NM\_203314 Homo sapiens 3-hydroxybutyrate dehydrogenase (heart, mitochondrial) (BDI NM 203315 Homo saplens 3-hydroxybutyrate dehydrogenase (heart, mitochondrial) (BDF NM\_203316 Homo sapiens dolichyl-phosphate (UDP-N-acetylglucosamine) N-acetylgluco NM\_203318 Homo sapiens myosin XVIIIA (MYO18A), transcript variant 2, mRNA NM\_203326 Homo saplens 5-azacytidine induced 2 (AZI2), transcript variant 2, mRNA NM\_203327 Homo sapiens solute carrier family 23 (nucleobase transporters), member 2 -NM\_203329 Homo saplens CD59 antigen p18-20 (antigen identified by monoclonal antibotic NM\_203330 Homo sapiens CD59 antigen p18-20 (antigen identified by monoclonal antibotic NM\_203331 Homo saplens CD59 antigen p18-20 (antigen Identified by monoclonal antibotic NM\_203339 Homo sapiens clusterin (complement lysis inhibitor, SP-40,40, sulfated glyco NM 203341 Homo sapiens 15 kDa selenoprotein (SEP15), transcript variant 2, mRNA NM 203342 Homo sapiens erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-I NM 203343 Homo sapiens erythrocyte membrane protein band 4.1 (elliptocytosis 1, RH-I NM\_203344 Homo sapiens SERTA domain containing 3 (SERTAD3), transcript variant 2, NM 203346 Homo sapiens high density lipoprotein binding protein (vigilin) (HDLBP), mRt NM 203347 Homo sapiens MSFL2541 (UNQ2541), mRNA NM 203348 Homo sapiens hypothetical MGC50722 (MGC50722), mRNA NM 203349 Homo sapiens rai-like protein (RaLP), mRNA NM\_203350 Homo sapiens zinc finger protein 265 (ZNF265), transcript variant 1, mRNA NM 203351 Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP3K3), t WC05644981 [ille:///E./WC05644981.gpc]

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NM 203352 Homo sapiens PDZ and LIM domain 7 (enicima) (PDLIM7), transcript variant NM 203353 Homo sapiens PDZ and LIM domain 7 (enigrma) (PDLIM7), transcript variant NM\_203354 Homo sapiens meningioma expressed antigren 6 (coiled-coil proline-rich) (MC NM\_203355 Homo sapiens meningioma expressed antigren 6 (coiled-coil proline-rich) (MC NM 203356 Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MC NM\_203357 Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MC NM 203364 Homo sapiens membrane component, chromosome 11, surface marker 1 (M NM 203365 Home sapiens Ras association (RalGDS/AF-6) and pleckstrin homology dom NM 203370 Homo sapiens similar to RIKEN cDNA 653O418L21 (LOC389119), mRNA NM\_203371 Homo sapiens similar to RIKEN cDNA 111O 018M03 (LOC387758), mRNA NM 203372 Homo sapiens acyl-CoA synthetase long-chain family member 3 (ACSL3), tra NM 203373 Homo sapiens hypothetical protein LOC283807 (LOC283807), mRNA NM 203374 Homo saplens similar to zinc finger protein (LOC147808), mRNA NM\_203375 Homo sapiens hypothetical gene supported by BC001801 (LOC284912), mR NM 203376 Homo sapiens similar to RIKEN cDNA 4930429020 (LOC388730), mRNA NM 203377 Homo sapiens myoglobin (MB), transcript variant 2, mRNA NM\_203378 Homo sapiens myoglobin (MB), transcript variant 3, mRNA NM\_203379 Homo sapiens acyl-CoA synthetase long-ch ain family member 5 (ACSL5), tra NM 203380 Homo sapiens acyl-CoA synthetase long-chain family member 5 (ACSL5), tra NM 203381 Homo sapiens protein for MGC71805 (MGC71805), mRNA NM 203382 Homo sapiens alpha-methylacyl-CoA racennase (AMACR), transcript variant NM 203383 Homo sapiens ribonuclease/angiogenin inhibitor (RNH), transcript variant 2.1 NM 203384 Homo sapiens ribonuclease/angiogenin inhiibitor (RNH), transcript variant 3, i NM 203385 Homo sapiens ribonuclease/angiogenin inhibitor (RNH), transcript variant 4, i NM\_203386 Homo saplens ribonuclease/angiogenin inhibitor (RNH), transcript variant 5, I NM\_203387 Homo sapiens ribonuclease/angiogenin inhibitor (RNH), transcript variant 6, i NM\_203388 Homo sapiens ribonuclease/angiogenin inhibitor (RNH), transcript variant 7, i NM\_203389 Homo sapiens ribonuclease/angiogenin inhibitor (RNH), transcript variant 8, i NM 203390 Homo sapiens similar to RIKEN cDNA 3000004N20 (LOC389677), mRNA NM 203391 Homo sapiens glycerol kinase (GK), transcript variant 1, mRNA NM 203392 Homo sapiens hypothetical gene supported by BC031617 (LOC284123), mR NM 203393 Homo sapiens hypothetical gene supported by BC031661 (LOC389458), mR NM 203394 Homo sapiens E2F transcription factor 7 (E2F7), mRNA NM 203395 Homo sapiens iodotyrosine dehalogenase 1 (DEHAL1), mRNA NM 203399 Homo sapiens stathmin 1/oncoprotein 18 (STMN1), transcript variant 2, mRN NM 203400 Homo sapiens similar to candidate mediator of the p53-dependent G2 arrest NM\_203401 Homo sapiens stathmin 1/oncoprotein 18 (STMN1), transcript variant 1, mRN NM 203402 Homo saplens similar to CG10671-like (LOC161247), mRNA NM 203403 Homo sapiens chromosome 9 open reading frame 150 (C9orf150), mRNA NM\_203405 Homo sapiens similar to RIKEN cDNA 231O002B14 (LOC388818), mRNA NM 203406 Homo saplens similar to metallo-beta-lactarmase superfamily protein (LOC15 NM 203407 Homo sapiens similar to CG32656-PA (LOC340602), mRNA NM 203408 Homo sapiens similar to hypothetical protein FLJ35782 (LOC158724), mRN/ NM 203411 Homo sapiens similar to RIKEN cDNA 260O 017H02 (LOC92162), mRNA NM 203412 Homo sapiens similar to RIKEN cDNA 4930 522D07 (LOC164153), mRNA NM 203413 Homo sapiens S-phase 2 protein (DERP6), mRNA NM 203414 Homo sapiens S-phase 2 protein (DERP6), mRNA NM\_203415 Homo saplens S-phase 2 protein (DERP6), mRNA NM\_203416 Homo sapiens CD163 antigen (CD163), transcript variant 2, mRNA NM\_203417 Homo sapiens Down syndrome critical region gene 1 (DSCR1), transcript vai NM 203418 Homo saplens Down syndrome critical region gene 1 (DSCR1), transcript vai NM 203419 Homo sapiens hypothetical protein LOC286016 (LOC286016), mRNA NM 203422 Home sapiens similar to hypothetical protein (LOC221091), mRNA NM 203423 Homo sapiens hypothetical gene supported by BC031673 (LOC389199), mR NM 203424 Homo sapiens hypothetical protein MGC50809 (LOC389123), mRNA NM 203425 Homo sapiens hypothetical gene supported by BC046200 (LOC388407), mR

NM 203426 Homo sapiens hypothetical protein FLJ90297 (LOC388152), mRNA

NM 203428 Homo sapiens Down syndrome critical region gene 8 (DSCR8), transcript vai NM 203429 Homo sapiens Down syndrome critical region gene 8 (DSCR8), transcript val NM\_203430 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) (PPIA), transcript va NM\_203431 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) (PPIA), transcript va NM\_203433 Homo sapiens Down syndrome critical region gene 2 (DSCR2), transcript val NM 203434 Homo sapiens similar to RIKEN cDNA 2610524G09 (LOC389792), mRNA NM 203436 Homo sapiens achaete-scute complex-like 4 (Drosophila) (ASCL4), mRNA NM\_203437 Homo sapiens aftiphilin protein (AFTIPHILIN), transcript variant 1, mRNA NM 203438 Homo sapiens chromosome 10 open reading frame 4 (C10orf4), transcript va NM 203439 Homo sapiens chromosome 10 open reading frame 4 (C10orf4), transcript vs NM 203440 Homo sapiens chromosome 10 open reading frame 4 (C10orf4), transcript ve NM\_203441 Homo sapiens chromosome 10 open reading frame 4 (C10orf4), transcript νε NM 203444 Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 9 (A NM 203445 Homo saplens ATP-binding cassette, sub-family B (MDR/TAP), member 9 (A NM 203446 Homo sapiens synaptojanin 1 (SYNJ1), transcript variant 2, mRNA NM 203447 Homo sapiens dedicator of cytokinesis 8 (DOCK8), mRNA NM 203448 Homo sapiens hypothetical protein MGC21881 (MGC21881), mRNA NM 203451 Homo sapiens hypothetical LOC400120 (LOC400120), mRNA NM 203452 Homo saplens hypothetical protein L-OC403312 (MGC39545), mRNA NM 203453 Homo sapiens hypothetical LOC403313 (LOC403313), mRNA NM 203454 Homo sapiens hypothetical protein MGC26594 (MGC26594), mRNA NM 203456 Homo sapiens peptidylprolyl isomerase E (cyclophilin E) (PPIE), transcript va NM 203457 Homo sapiens peptidylprolyl isomerase E (cyclophilin E) (PPIE), transcript ve NM 203458 Homo sapiens similar to NOTCH2 protein (N2N), mRNA NM\_203459 Homo sapiens KIAA1078 protein (KIAA1078), mRNA NM\_203462 Homo saplens PP784 protein (PP784), transcript variant 2, mRNA NM 203463 Homo sapiens LAG1 longevity assurance homolog 6 (S. cerevisiae) (LASS6) NM 203466 Homo sapiens peptidylprolyl isomerase (cyclophilin) like 5 (PPIL5), transcript NM\_203467 Homo saplens peptidylprolyl isomerase (cyclophilin) like 5 (PPIL5), transcript NM 203468 Homo sapiens ectonucleoside triphosphate diphosphohydrolase 2 (ENTPD2) NM\_203471 Homo sapiens lectin, galactoside-binding, soluble, 14 (LGALS14), transcript NM\_203472 Homo sapiens selenoprotein S (SELS), transcript variant 1, mRNA NM\_203473 Homo sapiens porcupine homolog (Drosophila) (PORCN), transcript variant I NM\_203474 Homo sapiens porcupine homolog (Drosophila) (PORCN), transcript variant ( NM\_203475 Homo saplens porcupine homolog (Drosophila) (PORCN), transcript variant I NM\_203476 Homo saplens porcupine homolog (Drosophila) (PORCN), transcript variant I NM\_203477 Homo saplens similar to RPL23AP7 protein (MGC70863), transcript variant 1 NM 203481 Homo sapiens hypothetical LOC403340 (MGC70870), mRNA NM 203486 Homo sapiens delta-like 3 (Drosophila) (DLL3), transcript variant 2, mRNA NM 203487 Homo sapiens protocadherin 9 (PCDH9), transcript variant 1, mRNA NM 203488 Homo sapiens acylphosphatase 1, erythrocyte (common) type (ACYP1), tran NM\_203494 Homo sapiens ubiquitin specific protease 50 (USP50), mRNA NM\_203495 Homo sapiens COMM domain containing 6 (COMMD6), transcript variant 2, I NM\_203497 Homo sapiens COMM domain containing 6 (COMMD6), transcript variant 1, I NM\_203499 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 42 (DDX42), transc NM\_203500 Homo sapiens kelch-like ECH-associated protein 1 (KEAP1), transcript varia NM\_203503 Homo sapiens C-type (calcium dependent, carbohydrate-recognition domain NM\_203504 Homo sapiens Ras-GTPase activating protein SH3 domain-binding protein 2 NM 203505 Homo sapiens Ras-GTPase activating protein SH3 domain-binding protein 2 NM 203506 Homo sapiens growth factor receptor-bound protein 2 (GRB2), transcript vari NM 203510 Homo sapiens transmembrane 6 superfamily member 2 (TM6SF2), transcrip NM 205543 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region, NM 205545 Homo saplens RGTR430 (UNQ430), mRNA NM 205548 Homo sapiens AASA9217 (UNQ9217), mRNA NM 205767 Homo sapiens QIL1 protein (QIL1), mRNA NM\_205768 Homo sapiens zinc finger protein 238 (ZNF238), transcript variant 1, mRNA

NM\_205833 Homo sapiens immunoglobulin superfamily, member 1 (IGSF1), transcript va

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- NM\_205834 Homo sapiens liver-specific bHLH-Zip transcription factor (LISCH7), transcription factor fact
- NM\_205841 Homo sapiens protease inhibitor H (MGC21394), mRNA
  NM\_205842 Homo sapiens NCK-associated protein 1 (NCKAP1), transcript variant 2, mR
- NM\_205843 Homo sapiens nuclear factor I/C (CCAAT-binding transcription factor) (NFIC)
  NM\_205845 Homo sapiens aldo-keto reductase family 1, member C2 (dihydrodiol dehydn
  NM\_205847 Homo sapiens hypothetical protein MGC21644 (MGC21644), transcript varia
  NM\_205847 Homo sapiens GDP-mannose pyrophosphondase A (GMPPA), transcript varia
- NM\_205848 Homo sapiens synaptotagmin VI (SYT6), mRNA
- NM\_205849 Homo sapiens family with sequence similarity 9, member B (FAM9B), mRNA
  NM\_205850 Homo sapiens solute carrier family 24, member 5 (SLC24A5), mRNA
- NM 205852 Homo sapiens macrophage antigen h (UNQ5782), mRNA
- NM\_205853 Homo sapiens musculoskeletal, embryonic nuclear protein 1 (MUSTN1), mR NM\_205854 Homo sapiens GSGL541 (UNQ541), mRNA
- NM\_205855 Homo sapiens GSGL541 (UNQ541), mRNA NM\_205855 Homo sapiens HWKM1940 (UNQ1940), mRNA
- NM\_205856 Homo sapiens PNPK6288 (LOC389852), mRNA
- NM\_205857 Homo sapiens FBI4 protein (FBI4), mRNA
- NM\_205858 Homo saplens neuromedin B (NMB), transcript variant 2, mRNA
- NM\_205859 Homo sapiens olfactory receptor, family 2, subfamily K, member 2 (OR2K2), NM\_205860 Homo sapiens nuclear receptor subfamily 5, group A, member 2 (NR5A2), tra
- NM\_205861 Homo saplens dehydrodolichyl dlphosphate synthase (DHDDS), transcript va NM\_205862 Homo saplens UDP glycosyltransferase 1 family, polypeptide A6 (UGT1A6).
- NM\_205863 Homo sapiens amyotrophic lateral sclerosis 2 (juvenile) chromosome region,
- NM\_205884 Homo saplens cancer/testis antigen 3 (CTAG3), transcript variant 2, mRNA NM\_206538 Homo saplens hypothetical protein LOC284361 (LOC284361), transcript vari
- NM\_206539 Homo sapiens hypothetical protein Locasesor (Locasesor), a aliastrip variant 2, mR
- NM\_206594 Homo sapiens estrogen-related receptor gamma (ESRRG), transcript variant NM\_206595 Homo sapiens estrogen-related receptor gamma (ESRRG), transcript variant
- NM\_206808 Homo saplens citrate lyase beta like (CLYBL), transcript variant 2, mRNA NM\_206809 Homo saplens myelin oligodendrocyte glycoprotein (MOG), transcript variant
- NM\_206810 Homo sapiens myelin oligodendrocyte glycoprotein (MOG), transcript variant
  NM\_206811 Homo sapiens myelin oligodendrocyte glycoprotein (MOG), transcript variant
- NM\_206812 Homo sapiens myelin oligodendrocyte glycoprotein (MOG), transcript variant.
- NM\_206813 Homo sapiens myelin oligodendrocyte glycoprotein (MOG), transcript variant NM\_206814 Homo sapiens myelin oligodendrocyte glycoprotein (MOG), transcript variant
- NM\_206817 Homo saplens osteoclast-associated receptor (OSCAR), transcript variant 2,
- NM\_206818 Homo sapiens osteoclast-associated receptor (OSCAR), transcript variant 1, NM\_206819 Homo sapiens myosin binding protein C, slow type (MYBPC1), transcript vari
- NM\_208820 Homo sapiens myosin binding protein C, slow type (MYBPC1), transcript vari
- NM\_205821 Homo sapiens myosin bInding protein C, slow type (MYBPC1), transcript vari NM\_205824 Homo sapiens vitamin K epoxide reductase complex, subunit 1 (VKORC1), transcript vari
- NM\_206825 Homo sapiens vitamin K epoxide reductase complex, subunit 1 (VK NM\_206825 Homo sapiens nucleostemin (NS), transcript variant 2, mRNA
- NM 206826 Homo sapiens nucleostemin (NS), transcript variant 3, mRNA
- NM 206827 Homo sapiens RAS-like, family 11, member A (RASL11A), mRNA
- NM\_206827 Homo sapiens RAS-like, family 11, member A (RASL11A), mRNA
  NM\_206828 Homo sapiens NACHT, leucine rich repeat and PYD containing 7 (NALP7), ti
- NM 206831 Homo sapiens zinc finger, CSL domain containing 2 (ZCSL2), mRNA
- NM\_206832 Homo sapiens AWKS9372 (UNQ9372), mRNA
- NM 206833 Homo sapiens cortexin 1 (CTXN1), mRNA
- NM 206834 Homo sapiens chromosome 6 open reading frame 201 (C6orf201), mRNA
- NM 206835 Homo sapiens TNF receptor-associated factor 7 (TRAF7), transcript variant 2
- NM\_206836 Homo sapiens peroxisomal D3,D2-encyl-CoA isomerase (PECI), transcript v: NM\_206837 Homo sapiens oxidored-nitro domain-containing protein (NOR1), transcript v:

NM\_206838 Homo sapiens similar to Hypothetical protein CBG21647 (LOC390511), mRN NM\_206839 Homo sapiens mortality factor 4 like 1 (MORF4L1), transcript variant 2, mRN. NM\_206840 Homo sapiens nuclear VCP-like (NVL), transcript variant 2, mRNA NM\_206841 Homo sapiens Fraser syndrome 1 (FRAS1), transcript variant 2, mRNA NM\_206852 Homo sapiens reticulon 1 (RTN1), transcript variant 3, mRNA NM 206853 Homo sapiens quaking homolog, KH domain RNA binding (mouse) (QKI), tra NM 206854 Homo sapiens quaking homolog, KH domain RNA binding (mouse) (QKI), tra NM 206855 Homo sapiens guaking homolog, KH domain RNA binding (mouse) (QKI), tra NM 206857 Homo sapiens reticulon 1 (RTN1), transcript variant 2, mRNA NM\_206858 Homo sapiens similar to protein phosphatase 1, regulatory (inhibitor) subunit NM\_206860 Homo sapiens transforming, acidic coiled-coil containing protein 2 (TACC2), NM\_206861 Homo sapiens transforming, acidic coiled-coil containing protein 2 (TACC2), NM 206862 Homo sapiens transforming, acidic coiled-coil containing protein 2 (TACC2), NM 206866 Homo sapiens BTB and CNC homology 1, basic leucine zipper transcription NM\_206873 Homo sapiens protein phosphatase 1, catalytic subunit, alpha isoform (PPP1 NM\_206876 Homo sapiens protein phosphatase 1, catalytic subunit, beta isoform (PPP10 NM\_206877 Homo sapiens protein phosphatase 1, catalytic subunit, beta isoform (PPP10 NM\_206880 Homo saplens olfactory receptor, family 2, subfamily V, member 2 (OR2V2), NM 206883 Homo sapiens prestin (motor protein) (PRES), transcript variant b, mRNA NM\_206884 Homo saplens prestin (motor protein) (PRES), transcript variant c, mRNA NM 206885 Homo sapiens prestin (motor protein) (PRES), transcript variant d. mRNA NM 206886 Homo saplens sarcoma antigen NY-SAR-41 (NY-SAR-41), mRNA NM 206887 Homo sapiens Down syndrome cell adhesion molecule (DSCAM), transcript ' NM\_206889 Homo sapiens chromosome 21 open reading frame 106 (C21orf106), transci NM 206890 Homo sapiens chromosome 21 open reading frame 106 (C21orf106), transci NM\_206891 Homo sapiens chromosome 21 open reading frame 106 (C21orf106), transci NM\_206892 Homo sapiens malate dehydrogenase 1B, NAD (soluble) (MDH1B), mRNA NM\_206893 Homo sapiens membrane-spanning 4-domains, subfamily A, member 10 (MS NM\_206894 Homo sapiens hypothetical protein LOC388536 (MGC62100), mRNA NM 206895 Homo sapiens ASCL830 (UNQ830), mRNA NM\_206898 Homo sapiens chromosome 21 open reading frame 61 (C21orf61), transcript NM\_206900 Homo sapiens reticulon 2 (RTN2), transcript variant 2, mRNA NM\_206901 Homo saplens reticulon 2 (RTN2), transcript variant 3, mRNA NM\_206902 Homo sapiens reticulon 2 (RTN2), transcript variant 4, mRNA NM 206907 Homo sapiens protein kinase, AMP-activated, alpha 1 catalytic subunit (PRK NM 206908 Homo saplens chromosome 6 open reading frame 216 (C6orf216), transcript NM\_206909 Homo sapiens pleckstrin and Sec7 domain containing 3 (PSD3), transcript vs NM\_206910 Homo sapiens chromosome 6 open reading frame 216 (C6orf216), transcript NM\_206911 Homo sapiens chromosome 6 open reading frame 216 (C6orf216), transcript NM 206912 Homo saplens chromosome 6 open reading frame 216 (C6orf216), transcript NM\_206914 Homo sapiens hepatocellularcarcinoma-associated antigen HCA557a (DKFZ NM 206915 Homo sapiens nerve growth factor receptor (TNFRSF16) associated protein NM 206917 Homo sapiens nerve growth factor receptor (TNFRSF16) associated protein NM 206918 Homo saplens chromosome 14 open reading frame 66 (C14orf66), mRNA NM\_206919 Homo sapiens ADP-ribosylation factor-like 9 (ARL9), mRNA NM 206920 Homo sapiens apical early endosomal glycoprotein precursor (AEGP), mRN/ NM\_206921 Homo sapiens chromosome 6 open reading frame 204 (C6orf204), mRNA NM\_206922 Homo sapiens thymus LIM protein TLP-A (TLP), rnRNA NM\_206923 Homo sapiens YY2 transcription factor (YY2), mRNA NM\_206925 Homo sapiens carbonic anhydrase XII (CA12), transcript variant 2, mRNA NM 206926 Homo sapiens selenoprotein N. 1 (SEPN1), transcript variant 2, mRNA NM 206927 Homo sapiens synaptotagmin-like 2 (SYTL2), transcript variant c, mRNA NM 206928 Homo sapiens synaptotagmin-like 2 (SYTL2), transcript variant d, mRNA NM 206929 Homo sapiens synaptotagmin-like 2 (SYTL2), transcript variant e, mRNA NM\_206930 Homo sapiens synaptotagmin-like 2 (SYTL2), transcript variant f, mRNA NM\_206933 Homo sapiens Usher syndrome 2A (autosomal recessive, mild) (USH2A), tra

NM\_206937 Homo sapiens ligase IV, DNA, ATP-dependent (LIG4), mRNA

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NM\_206938 Homo sapiens membrane-spanning 4-domains, subfamily A, member 7 (MS-NM\_206939 Homo sapiens membrane-spanning 4-domains, subfamily A, member 7 (MS-NM\_206940 Homo sapiens membrane-spanning 4-domains, subfamily A, member 7 (MS-NM\_206943 Homo sapiens latent transforming growth factor beta binding protein 1 (LTBF NM\_206944 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM\_206945 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM\_206946 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM 206947 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM 206948 Homo sapiens transient receptor potential cation channel, subfamily M, mem NM 206949 Homo sapiens family with sequence similarity 14, member B (FAM14B), mRI NM 206953 Homo sapiens preferentially expressed antigen in melanoma (PRAME), trans NM 206954 Homo sapiens preferentially expressed antigen in melanoma (PRAME), trans NM 206955 Homo saciens preferentially expressed antigen in melanoma (PRAME), trans NM 206956 Home saniers preferentially expressed antigen in melanoma (PRAME), trans NM\_206961 Homo sapiens leukocyte tyrosine kinase (LTK), transcript variant 2, mRNA NM\_206962 Homo sapiens HMT1 hnRNP methyltransferase-like 1 (S. cerevisiae) (HRMT NM 206963 Homo sapiens retinoic acid receptor responder (tazarotene Induced) 1 (RARI NM 206964 Homo saplens family with sequence similarity 3, member B (FAM3B), transcr NM 206965 Homo sagiens formiminotransferase cyclodeaminase (FTCD), transcript varia NM 206966 Homo sapiens similar to AVLV472 (MGC23985), mRNA NM 206967 Homo saplens MGC17624 protein (MGC17624), mRNA NM 206994 Homo saniens gonadotronin-releasing hormone (type 2) receptor 2 (GNRHR NM 206996 Homo saplens projection protein PF6 (PF6), mRNA NM\_206997 Homo sapiens G protein-coupled receptor 152 (GPR152), mRNA NM 206998 Homo saniens secretoglobin family 1D member 4 (SCGB1D4), mRNA NM 206999 Homo sapiens KIAA1007 protein (KIAA1007), transcript variant 2, mRNA NM 207002 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varie NM\_207003 Homo sapiens BCL2-like 11 (apoptosis facilitator) (BCL2L11), transcript varia NM 207005 Homo sapiens upstream transcription factor 1 (USF1), transcript variant 2, m NM 207006 Homo saplens hypothetical protein MGC14128 (BJ-TSA-9), transcript variant NM 207007 Homo sapiens chemokine (C-C motif) ligand 4-like 1, telomeric (CCL4L1), ml NM 207009 Homo sapiens family with sequence similarity 45, member A (FAM45A), mR1 NM 207012 Homo sapiens adaptor-related protein complex 3, mu 1 subunit (AP3M1), tra NM 207013 Homo sapiens transcription elongation factor B (SIII), polypeptide 2 (18kDa, NM\_207014 Homo sapiens hypothetical protein FLJ23129 (FLJ23129), transcript variant : NM 207015 Homo saniens N-acetylated alpha-linked acidic dipentidase 2 (NAALADL2), a NM 207032 Homo saniens endothelin 3 (EDN3), transcript variant 2, mRNA NM 207033 Homo sagiens endothelin 3 (EDN3), transcript variant 3, mRNA NM 207034 Homo sapiens endothelin 3 (EDN3), transcript variant 4, mRNA NM 207035 Homo saplens NPD014 protein (NPD014), transcript variant 1, mRNA NM 207036 Homo saplens transcription factor 12 (HTF4, helix-loop-helix transcription fac NM 207037 Homo sapiens transcription factor 12 (HTF4, helix-loop-helix transcription fac NM 207038 Homo saplens transcription factor 12 (HTF4, hellx-loop-hellx transcription fac NM\_207040 Homo saplens transcription factor 12 (HTF4, helix-loop-helix transcription fac NM 207042 Homo sapiens endosulfine alpha (ENSA), transcript variant 1, mRNA NM 207043 Homo sapiens endosulfine alpha (ENSA), transcript variant 2, mRNA NM 207044 Homo sapiens endosulfine alpha (ENSA), transcript variant 4, mRNA NM\_207045 Homo sapiens endosulfine alpha (ENSA), transcript variant 5, mRNA NM 207046 Homo sapiens endosulfine alpha (ENSA), transcript variant 6, mRNA NM 207047 Homo sapiens endosulfine alpha (ENSA), transcript variant 7, mRNA NM 207102 Homo sapiens F-box and WD-40 domain protein 12 (FBXW12), mRNA NM 207103 Homo sapiens DTFT5783 (UNQ5783), mRNA NM 207106 Homo sapiens three prime repair exonuclease 2 (TREX2), transcript variant NM 207107 Homo sapiens three prime repair exonuclease 2 (TREX2), transcript variant ( NM 207108 Homo sapiens astrotactin (ASTN), transcript variant 2, mRNA NM 207111 Homo sapiens TRIAD3 protein (TRIAD3), transcript variant 1, mRNA

NM\_207112 Homo sapiens hydroxyacylglutathione hydrolase-like (HAGHL), transcript var

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NM\_207113 Homo sapiens solute carrier family 37 (glycerol-3-phosphate transporter), me NM\_207115 Homo sapiens zinc finger protein 580 (ZNF580), transcript variant 2, mRNA NM 207116 Homo saplens TRIAD3 protein (TRIAD3), transcript variant 2, mRNA NM\_207117 Homo sapiens chromosome 14 open reading frame 68 (C14o rf68), mRNA NM 207118 Homo sapiens general transcription factor IIH, polypeptide 5 (GTF2H5), mRN NM 207119 Homo sapiens leucine rich repeat containing 20 (LRRC20), transcript variant NM\_207121 Homo sapiens chromosome 20 open reading frame 55 (C20orf55), transcript NM 207122 Homo sapiens exostoses (multiple) 2 (EXT2), transcript variant 2, mRNA NM 207123 Homo sapiens GRB2-associated binding protein 1 (GAB1), transcript variant NM 207125 Homo sapiens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM 207126 Homo saplens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM 207127 Homo sapiens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM 207128 Homo sapiens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM\_207129 Homo sapiens polyamine oxidase (exo-N4-amino) (PAOX), transcript variant NM 207168 Homo sapiens endosulfine alpha (ENSA), transcript variant 8, mRNA NM\_207170 Homo saplens GCIP-interacting protein p29 (P29), transcript variant 2, mRN/ NM 207171 Homo sapiens pogo transposable element with ZNF domain (POGZ), transcr NM 207172 Homo saplens G protein-coupled receptor 154 (GPR154), transcript variant 1 NM 207173 Homo saplens G protein-coupled receptor 154 (GPR154), transcript variant 2 NM 207174 Homo saplens ATP-binding cassette, sub-family G (WHITE), member 1 (ABC NM\_207181 Homo saplens nephronophthisis 1 (juvenile) (NPHP1), transcript variant 2, m NM 207186 Homo sapiens olfactory receptor, family 10, subfamily A, member 4 (OR10A4 NM 207189 Homo sapiens bromodomain, testis-specific (BRDT), transcript variant 1, mR NM 207191 Homo sapiens a disintegrin and metalloproteinase domain 15 (metargidin) (A NM\_207194 Homo sapiens a disintegrin and metalloproteinase domain 15 (metargidin) (A NM\_207195 Homo sapiens a disintegrin and metalloproteinase domain 15 (metargidin) (A NM 207196 Homo sapiens a disintegrin and metalloproteinase domain 15 (metargidin) (A NM 207197 Homo sapiens a disintegrin and metalloproteinase domain 15 (metargidin) (A NM 207283 Homo sapiens AAA1 protein (AAA1), transcript variant IX, mR NA NM\_207284 Homo sapiens AAA1 protein (AAA1), transcript variant II, mRNA NM\_207285 Homo sapiens AAA1 protein (AAA1), transcript variant III, mRINA NM\_207286 Homo sapiens AAA1 protein (AAA1), transcript variant IV, mRINA NM 207287 Homo sapiens AAA1 protein (AAA1), transcript variant V, mRNA NM 207288 Homo sapiens AAA1 protein (AAA1), transcript variant VI, mRNA NM\_207289 Homo sapiens AAA1 protein (AAA1), transcript variant VII, mRNA NM 207290 Homo sapiens AAA1 protein (AAA1), transcript variant VIII, mRNA NM 207291 Homo sapiens upstream transcription factor 2, c-fos interacting (USF2), trans NM\_207292 Homo saplens muscleblind-like (Drosophila) (MBNL1), transcript variant 2, m NM\_207293 Homo sapiens muscleblind-like (Drosophila) (MBNL1), transcript variant 3, m NM\_207294 Homo sapiens muscleblind-like (Drosophila) (MBNL1), transcript variant 4, m NM\_207295 Homo sapiens muscleblind-like (Drosophila) (MBNL1), transcript variant 5, m NM 207296 Homo saplens muscleblind-like (Drosophila) (MBNL1), transcript variant 6, m NM 207297 Homo sapiens muscleblind-like (Drosophila) (MBNL1), transcript variant 7, m NM\_207299 Homo sapiens plasticity related gene 3 (PRG-3), transcript variant 1, mRNA NM\_207303 Homo sapiens attractin-like 1 (ATRNL1), mRNA NM\_207304 Homo sapiens muscleblind-like 2 (Drosophila) (MBNL2), transcript variant 3, NM\_207305 Homo sapiens forkhead box D4 (FOXD4), mRNA NM 207306 Homo sapiens KIAA0495 (KIAA0495), mRNA NM 207307 Homo sapiens hypothetical protein LOC90288 (LOC90288), m RNA NM\_207308 Homo sapiens nuclear pore membrane glycoprotein 210-like (LOC91181), m NM 207309 Homo sapiens UDP-N-acteviglucosamine pyrophosphorylase 1-like 1 (UAP1 NM 207310 Homo sapiens hypothetical protein DKFZp434E2321 (DKFZp434E2321), mF NM\_207311 Homo sapiens hypothetical protein LOC92558 (LOC92558), mRNA NM 207312 Homo sapiens similar to alpha tubulin (LOC112714), mRNA NM 207313 Homo sapiens hypothetical protein LOC124842 (LOC124842), mRNA NM 207314 Homo saplens VNFT9373 (UNQ9373), mRNA NM 207315 Homo sapiens hypothetical protein LOC129607 (LOC129607), mRNA

NM\_207316 Homo sapiens SRSR846 (UNQ846), mRNA NM 207317 Homo sapiens FLJ32921 protein (FLJ32921), mRNA NM 207319 Homo sapiens FLJ32867 protein (FLJ32867), mRNA NM\_207320 Homo sapiens FLJ25831 protein (FLJ25831), mRNA NM\_207321 Homo sapiens chromosome 10 open reading frame 129 (C10orf129), mRNA NM 207322 Homo sapiens hypothetical LOC145741 (LOC145741), mRNA NM 207323 Homo sapiens hypothetical protein DKFZp667M2411 (DKFZp667M2411), ml NM 207324 Homo sapiens hypothetical protein LOC147650 (LOC147650), mRNA NM\_207325 Homo sapiens hypothetical protein LOC147991 (LOC147991), mRNA NM\_207326 Homo sapiens hypothetical protein LOC149134 (LOC149134), mRNA NM\_207327 Homo sapiens similar to RIKEN cDNA 2210021J22 (LOC150383), mRNA NM\_207328 Homo sapiens hypothetical protein LOC150763 (LOC150763), mRNA NM 207329 Homo sapiens myeloid-associated differentiation marker-like (MYADML), mR NM 207330 Homo sapiens hypothetical protein LOC152519 (LOC152519), mRNA NM 207331 Homo sapiens hypothetical protein LOC153561 (LOC153561), mRNA NM 207332 Homo sapiens hypothetical protein LOC157697 (LOC157697), mRNA NM 207333 Homo sapiens hypothetical protein LOC162967 (LOC162967), mRNA NM 207334 Homo sapiens family with sequence similarity 43, member B (FAM43B), mRt NM 207335 Homo sapiens FLJ46299 protein (FLJ46299), mRNA NM\_207336 Homo sapiens likely ortholog of mouse zinc finger protein EZI (EZI), mRNA NM\_207337 Homo sapiens hypothetical protein LOC196394 (LOC196394), mRNA NM\_207338 Homo sapiens likely ortholog of mouse klotho lactase-phlorizin hydrolase rela NM\_207339 Homo sapiens similar to PAGE-5 protein (MGC62094), mRNA NM\_207340 Homo saplens hypothetical protein LOC254359 (LOC254359), mRNA NM 207341 Homo sapiens similar to ZP1 precursor (MGC87693), mRNA NM\_207343 Homo sapiens hypothetical protein DKFZp547C195 (DKFZp547C195), mRN. NM\_207344 Homo sapiens hypothetical protein LOC283377 (LOC283377), mRNA NM\_207345 Homo sapiens HEEE9341 (UNQ9341), mRNA NM\_207346 Homo sapiens likely homolog of yeast SEN54 (SEN54L), mRNA NM 207347 Homo sapiens chromosome 18 open reading frame 30 (C18orf30), mRNA NM\_207348 Homo sapiens hypothetical protein LOC284723 (LOC284723), mRNA NM\_207349 Homo sapiens hypothetical protein LOC284739 (LOC284739), mRNA NM\_207350 Homo saplens similar to FRG1 protein (FSHD region gene 1 protein) (MGC7. NM\_207351 Homo sapiens hypothetical protein FLJ33674 (FLJ33674), mRNA NM\_207352 Homo sapiens cytochrome P450, family 4, subfamily V, polypeptide 2 (CYP4 NM\_207353 Homo sapiens ubiquitin-conjugating enzyme UbcM2 (LOC286480), mRNA NM\_207354 Homo sapiens hypothetical protein LOC338692 (LOC338692), mRNA NM 207355 Homo sapiens protein expressed in prostate, ovary, testis, and placenta (PO NM\_207356 Homo sapiens hypothetical protein LOC339448 (LOC339448), mRNA NM\_207357 Homo sapiens hypothetical protein LOC339524 (LOC339524), mRNA NM 207358 Homo sapiens hypothetical protein LOC339789 (LOC339789), mRNA NM\_207359 Homo saplens glutamate decarboxylase-like 1 (GADL1), mRNA NM\_207362 Homo sapiens similar to 2010300C02Rik protein (MGC42367), mRNA NM\_207363 Homo sapiens Nck-associated protein 5 (NAP5), mRNA NM\_207364 Homo sapiens G protein-coupled receptor 148 (GPR148), mRNA NM\_207365 Homo saplens similar to Arylacetamide deacetylase (AADAC) (MGC72001). NM\_207366 Homo sapiens FLJ44060 protein (FLJ44060), mRNA NM\_207367 Homo sapiens FLJ42291 protein (FLJ42291), mRNA NM 207368 Homo sapiens hypothetical protein LOC348262 (LOC348262), mRNA NM\_207370 Homo sapiens G protein-coupled receptor 153 (GPR153), mRNA NM\_207371 Homo sapiens FLJ45187 protein (FLJ45187), mRNA NM\_207372 Homo sapiens SH2 domain containing 4B (SH2D4B), mRNA NM\_207373 Homo sapiens chromosome 10 open reading frame 99 (C10orf99), mRNA NM\_207374 Homo sapiens offactory receptor (UNQ6469), mRNA NM 207375 Homo sapiens INPE5792 (UNQ5792), mRNA NM\_207376 Homo sapiens hypothetical protein (LOC387882), mRNA

NM\_207377 Homo sapiens TIMM9 (UNQ9438), mRNA

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NM 207378 Homo sapiens serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antij
 NM 207379 Homo sapiens FLJ42486 protein (FLJ42486), mRNA
 NM_207380 Homo sapiens FLJ43339 protein (FLJ43339), mRNA
 NM_207381 Homo sapiens FLJ41287 protein (FLJ41287), mRNA
 NM_207382 Homo sapiens FLJ43276 protein (FLJ43276), mRNA
NM_207383 Homo sapiens FLJ42289 protein (FLJ42289), mRNA
NM_207384 Homo sapiens QRWT5810 (UNQ5810), mRNA
NM_207385 Homo sapiens FLJ26184 protein (FLJ26184), mRNA
NM 207386 Homo sapiens FLJ45455 protein (FLJ45455), mRNA
NM 207387 Homo sapiens FLJ35696 protein (FLJ35696), mRNA
NM 207388 Homo sapiens FLJ31222 protein (FLJ31222), mRNA
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NM 207390 Homo sapiens FLJ45910 protein (FLJ45910), mRNA
NM 207391 Homo sapiens FLJ45744 protein (FLJ45744), mRNA
NM 207392 Homo sapiens KIPV467 (UNQ467), mRNA
NM_207393 Homo sapiens insulin growth factor-like family member 3 (IGFL3), mRNA
NM_207394 Homo sapiens FLJ45949 protein (FLJ45949), mRNA
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NM_207396 Homo sapiens FLJ46380 protein (FLJ46380), mRNA
NM_207397 Homo sapiens EAPG6122 (UNQ6122), mRNA
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NM_207416 Homo sapiens FLJ44082 protein (FLJ44082), mRNA
NM_207417 Homo sapiens FLJ46082 protein (FLJ46082), mRNA
NM_207418 Homo sapiens Similar to RIKEN cDNA 2700049P18 gene (MGC 57827), mRI
NM_207419 Homo sapiens C1q and tumor necrosis factor related protein 8 (C1QTNF8), r
NM_207420 Homo saplens intestinal facilitative glucose transporter 7 (SLC2A7), mRNA
NM_207421 Homo sapiens peptidylarginine deiminase type 6 (PADI6), mRNA
NM_207422 Homo sapiens FLJ44635 protein (FLJ44635), mRNA
NM_207423 Homo sapiens FLJ45983 protein (FLJ45983), mRNA
NM_207424 Homo sapiens FLJ40536 protein (FLJ40536), mRNA
NM_207426 Homo sapiens FLJ46831 protein (FLJ46831), mRNA
NM_207427 Homo sapiens hypothetical gene supported by AY129010 (LOC399851), mR
NM 207428 Homo sapiens FLJ45212 protein (FLJ45212), mRNA
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NM_207437 Homo sapiens FLJ43486 protein (FLJ43486), mRNA
NM_207438 Homo sapiens FLJ43808 protein (FLJ43808), mRNA
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NM_207439 Homo sapiens FLJ46358 protein (FLJ46358). mRNA
NM 207440 Homo sapiens FLJ26443 protein (FLJ26443), mRNA
NM_207441 Homo sapiens FLJ42220 protein (FLJ42220). mRNA
NM 207442 Homo sapiens FLJ39779 protein (FLJ39779), mRNA
NM 207443 Homo sapiens FLJ45244 protein (FLJ45244), mRNA
NM 207444 Homo sapiens FLJ35695 protein (FLJ35695), mRNA
NM 207445 Homo sapiens FLJ39531 protein (FLJ39531), mRNA
NM 207446 Homo sapiens hypothetical gene supported by AK075564; BC060873 (LOC4
NM 207447 Homo sapiens IFMQ9370 (UNQ9370), mRNA
NM 207448 Homo sapiens FLJ45256 protein (FLJ45256), mRNA
NM_207449 Homo sapiens FLJ44674 protein (FLJ44674), mRNA
NM_207450 Homo sapiens FLJ27243 protein (FLJ27243), mRNA
NM 207451 Homo sapiens FLJ45121 protein (FLJ45121), mRNA
NM_207452 Homo sapiens FLJ45200 protein (FLJ45200). mRNA
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NM 207454 Homo sapiens FLJ44815 protein (FLJ44815), mRNA
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NM 207459 Homo sapiens FLJ35767 protein (FLJ35767), mRNA
NM 207460 Homo sapiens FLJ44313 protein (FLJ44313), mRNA
NM 207461 Homo sapiens FLJ44881 protein (FLJ44881), mRNA
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NM 207467 Homo sapiens FLJ35530 protein (FLJ35530), mRNA
NM 207468 Homo sapiens FLJ43505 protein (FLJ43505), mRNA
NM_207469 Homo sapiens KFLL827 (UNQ827), mRNA
NM_207470 Homo sapiens FLJ45832 protein (FLJ45832), mRNA
NM 207471 Homo sapiens FLJ42200 protein (FLJ42200), mRNA
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NM_207495 Homo sapiens hypothetical protein DKFZp686I15217 (DKFZp686I15217), ml
NM 207496 Homo sapiens chromosome 6 open reading frame 214 (C6orf214), mRNA
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NM_207499 Homo sapiens FLJ41841 protein (FLJ41841), mRNA
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NM 207500 Homo sapiens FLJ44955 protein (FLJ44955), mRNA NM 207501 Homo sapiens FLJ27255 protein (FLJ27255), mRNA NM 207502 Homo sapiens chromosome 6 open reading frame 122 (C6orf122), mRNA NM 207503 Homo sapiens FLJ42280 protein (FLJ42280), mRNA NM\_207504 Homo sapiens FLJ46365 protein (FLJ46365), mRNA NM\_207505 Homo sapiens FLJ45248 protein (FLJ45248), mRNA NM 207506 Homo sapiens sterile alpha motif domain containing 12 (SAMD12), mRNA NM 207507 Homo sapiens FLJ45202 protein (FLJ45202), mRNA NM 207508 Homo sapiens FLJ45478 protein (FLJ45478), mRNA NM 207509 Homo sapiens FLJ46836 protein (FLJ46836), mRNA NM 207510 Homo sapiens FLJ45224 protein (FLJ45224), mRNA NM 207511 Homo sapiens FLJ36268 protein (FLJ36268), mRNA NM 207512 Homo sapiens nuclear RNA export factor-like (LOC401610), mRNA NM 207513 Homo sapiens POTE14 (LOC404785), mRNA NM\_207514 Homo sapiens hypothetical protein FLJ20186 (FLJ20186), transcript variant NM\_207517 Homo sapiens ADAMTS-like 3 (ADAMTSL3), mRNA NM 207518 Homo sapiens protein kinase, cAMP-dependent, catalytic, alpha (PRKACA), NM\_207519 Homo sapiens zeta-chain (TCR) associated protein kinase 70kDa (ZAP70), t NM 207520 Homo sapiens reticulon 4 (RTN4), transcript variant 4, mRNA NM\_207521 Homo sapiens reticulon 4 (RTN4), transcript variant 5, mRNA NM 207577 Homo sapiens microtubule-associated protein 6 (MAP6), transcript variant 2, NM 207578 Homo sapiens protein kinase, cAMP-dependent, catalytic, beta (PRKACB), ti NM 207581 Homo sapiens similar to Numb-interacting homolog gene (LOC405753), mRI NM 207582 Homo sapiens HERV-FRD provirus ancestral Env polyprotein (HERV-FRD), I NM 207584 Homo sapiens interferon (alpha, beta and omega) receptor 2 (IFNAR2), trans NM 207585 Homo saplens interferon (alpha, beta and omega) receptor 2 (IFNAR2), trans NM 207627 Homo sapiens ATP-binding cassette, sub-family G (WHITE), member 1 (ABC NM\_207628 Homo sapiens ATP-binding cassette, sub-family G (WHITE), member 1 (ABC NM\_207629 Homo sapiens ATP-binding cassette, sub-family G (WHITE), member 1 (ABC NM 207630 Homo sapiens ATP-binding cassette, sub-family G (WHITE), member 1 (ABC NM 207644 Homo sapiens similar to hypothetical protein LOC192734 (LOC388886), mRI NM 207645 Homo sapiens similar to expressed sequence Al593442 (LOC399947), mRN NM\_207646 Homo sapiens eosinophil lysophospholipase-like (LOC400696), mRNA NM 207647 Homo sapiens similar to fibronectin type 3 and SPRY domain-containing prof NM\_207660 Homo sapiens nuclear protein UKp68 (FLJ11806), transcript variant 2, mRN/ NM 207661 Home sapiens nuclear protein UKp68 (FLJ11806), transcript variant 3, mRN/ NM 207662 Homo sapiens nuclear protein UKp68 (FLJ11806), transcript variant 4, mRN/ NM\_207672 Homo sapiens GRIP1 associated protein 1 (GRIPAP1), transcript variant 2, r NM 212460 Homo sapiens ADP-ribosylation factor-like 4A (ARL4A), transcript variant 2, I NM 212461 Homo sapiens protein kinase, AMP-activated, gamma 1 non-catalytic subuni NM 212464 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 8, mRNA NM\_212465 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 7, mRNA NM 212467 Homo sapiens calpain 3, (p94) (CAPN3), transcript variant 9, mRNA NM\_212469 Homo sapiens choline kinase alpha (CHKA), transcript variant 2, mRNA NM\_212471 Homo sapiens protein kinase, cAMP-dependent, regulatory, type I, alpha (tis-NM\_212472 Homo sapiens protein kinase, cAMP-dependent, regulatory, type I, alpha (tis. NM 212474 Homo sapiens fibronectin 1 (FN1), transcript variant 6, mRNA NM 212475 Homo sapiens fibronectin 1 (FN1), transcript variant 2, mRNA NM 212476 Homo saplens fibronectin 1 (FN1), transcript variant 5, mRNA NM 212478 Homo sapiens fibronectin 1 (FN1), transcript variant 4, mRNA NM 212479 Homo sapiens zinc finger, MYND domain containing 11 (ZMYND11), transcri NM 212481 Homo sapiens AT rich Interactive domain 5A (MRF1-like) (ARID5A), transcrip NM 212482 Homo sapiens fibronectin 1 (FN1), transcript variant 1, mRNA NM 212492 Homo sapiens G protein pathway suppressor 1 (GPS1), transcript variant 1, I NM 212502 Homo sapiens PCTAIRE protein kinase 3 (PCTK3), transcript variant 2, mRN NM 212503 Homo sapiens PCTAIRE protein kinase 3 (PCTK3), transcript variant 1, mRN NM 212530 Homo sapiens cell division cycle 25B (CDC25B), transcript variant 5, mRNA

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NM\_212533 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 2 (ABC4 NM\_212535 Homo sapiens protein kinase C, beta 1 (PRKCB1), transcript variant 1, mRN. NM\_212539 Homo sapiens protein kinase C, delta (PRKCD), transcript variant 2, mRNA NM\_212540 Homo sapiens E2F transcription factor 6 (E2F6), transcript variant f, mRNA NM\_212543 Homo sapiens UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polyper NM\_212550 Homo sapiens biogenesis of lysosome-related organelles complex-1, subuni-NM 212551 Homo sapiens hypothetical protein SB145 (SB145), mRNA NM 212552 Homo sapiens similar to RIKEN 1810056020 (LOC388962), mRNA NM 212553 Homo sapiens deubiquitinating enzyme DUB4 (DUB4), mRNA NM\_212554 Homo sapiens similar to CG9643-PA (LOC399818), mRNA NM\_212555 Homo sapiens LVLF3112 (UNQ3112), mRNA NM\_212556 Homo sapiens ankynn repeat and SOCS box-containing 18 (ASB18), mRNA NM\_212557 Homo sapiens RSTI689 (UNQ689), mRNA NM\_212558 Homo sapiens similar to RIKEN A930001M12 (LOC401498), mRNA NM\_212559 Homo sapiens X Kell blood group precursor-related, X-linked (XKRX), mRNA NM\_213560 Homo sapiens protein kinase N1 (PKN1), transcript variant 1, mRNA NM\_213566 Homo sapiens DNA fragmentation factor, 45kDa, alpha polypeptide (DFFA), NM\_213568 Homo saplens solute carrier family 39 (zinc transporter), member 3 (SLC39A NM\_213569 Homo sapiens nebulette (NEBL), transcript variant 2, mRNA NM\_213589 Homo sapiens Ras association (RalGDS/AF-6) and pleckstrin homology dom NM 213590 Homo sapiens ret finger protein 2 (RFP2), transcript variant 3, mRNA NM 213593 Homo sapiens deiodinase, iodothyronine, type I (DIO1), transcript variant 2, I NM\_213594 Homo sapiens regulatory factor X, 4 (influences HLA class II expression) (RF NM\_213596 Homo sapiens forkhead box N4 (FOXN4), mRNA NM\_213597 Homo sapiens hypothetical protein LOC124751 (LOC124751), mRNA NM\_213598 Homo sapiens zinc finger protein 543 (ZNF543), mRNA NM\_213599 Homo sapiens transmembrane protein 16E (TMEM16E), mRNA NM\_213600 Homo sapiens hypothetical protein LOC255189 (LOC255189), mRNA NM\_213601 Homo saplens hypothetical protein LOC283578 (LOC283578), mRNA NM\_213602 Homo saplens CD33 antigen-like 3 (CD33L3), mRNA NM\_213603 Homo sapiens hypothetical protein LOC285989 (LOC285989), mRNA NM\_213604 Homo sapiens thrombospondin, type I, domain containing 6 (THSD6), mRNA NM 213605 Homo sapiens zinc finger protein 517 (ZNF517), mRNA NM 213606 Homo sapiens similar monocarboxylate transporter (LOC387700), mRNA NM\_213607 Homo sapiens similar to RIKEN 4933439F11 (LOC388389), mRNA NM\_213608 Homo sapiens IIDS6411 (UNQ6411), mRNA NM\_213609 Homo sapiens TAFA1 protein (TAFA1), mRNA NM\_213611 Homo sapiens solute carrier family 25 (mitochondrial carrier; phosphate carri NM\_213612 Homo sapiens solute carrier family 25 (mitochondrial carrier; phosphate carri NM 213613 Homo saplens solute carrier family 26 (sulfate transporter), member 1 (SLC2 NM 213618 Homo sapiens suppression of tumorigenicity 5 (ST5), transcript variant 3, mF NM 213619 Homo saplens ATPase, H+ transporting, lysosomal 50/57kDa, V1 subunit H NM\_213620 Homo sapiens ATPase, H+ transporting, lysosomal 50/57kDa, V1 subunit H · NM 213621 Homo sapiens 5-hydroxytryptamine (serotonin) receptor 3A (HTR3A), transci NM\_213622 Homo sapiens STAM binding protein (STAMBP), transcript variant 3, mRNA NM\_213631 Homo sapiens chromosome 20 open reading frame 132 (C20orf132), transci NM\_213632 Homo sapiens chromosome 20 open reading frame 132 (C20orf132), transcr NM\_213633 Homo sapiens pregnancy specific beta-1-glycoprotein 4 (PSG4), transcript ve NM\_213636 Homo sapiens PDZ and LIM domain 7 (enigma) (PDLIM7), transcript variant NM 213645 Homo sapiens tryptophanyl-tRNA synthetase (WARS), transcript variant 3, m NM\_213646 Homo sapiens tryptophanyl-tRNA synthetase (WARS), transcript variant 4, nr NM\_213647 Homo sapiens fibroblast growth factor receptor 4 (FGFR4), transcript variant NM 213648 Homo sapiens transcription factor 7 (T-cell specific, HMG-box) (TCF7), trans-NM 213649 Homo sapiens sideroflexin 4 (SFXN4), transcript variant 1, mRNA NM 213650 Homo sapiens sideroflexin 4 (SFXN4), transcript variant 3, mRNA NM\_213651 Homo sapiens solute carrier family 25 (mitochondrial carrier; phosphate carri

NM\_213652 Homo sapiens hemochromatosis type 2 (juvenile) (HFE2), transcript variant c

NM\_213653 Homo saplens hemochromatosis type 2 (juvenile) (HFE2), transcript variant a NM 213654 Homo sapiens armadillo repeat containing 8 (ARMC8), mRNA NM\_213655 Homo sapiens hereditary sensory neuropathy, type II (HSN2), mRNA NM\_213656 Homo sapiens type I hair keratin KA35 (KA35), mRNA NM\_213657 Homo sapiens killer cell lectin-like receptor subfamily C, member 1 (KLRC1), NM\_213658 Homo sapiens killer cell lectin-like receptor subfamily C, member 1 (KLRC1), NM\_213662 Homo sapiens signal transducer and activator of transcription 3 (acute-phase NM\_213674 Homo sapiens tropomyosin 2 (beta) (TPM2), transcript variant 2, mRNA NM 213720 Homo sapiens chromosome 22 open reading frame 16 (C22orf16), mRNA NM 213723 Homo sapiens chromosome 13 open reading frame 25 (C13orf25), transcript NM 213724 Homo sapiens chromosome 13 open reading frame 25 (C13orf25), transcript NM\_213725 Homo sapiens ribosomal protein, large, P1 (RPLP1), transcript variant 2, mR NM\_213726 Homo sapiens inhibitor of CDK interacting with cyclin A1 (INCA1), mRNA NM\_214461 Homo saplens MGC50273 protein (MGC50273), mRNA NM\_214462 Homo sapiens dapper homolog 2, antagonist of beta-catenin (xenopus) (DA( NM\_214675 Homo sapiens CD209 antigen-like (CD209L), transcript variant 2, mRNA NM\_214676 Homo sapiens CD209 antigen-like (CD209L), transcript variant 3, mRNA NM\_214677 Homo sapiens CD209 antigen-like (CD209L), transcript variant 4, mRNA NM 214678 Homo saplens CD209 antigen-like (CD209L), transcript variant 5, mRNA NM\_214679 Homo saplens CD209 antigen-like (CD209L), transcript variant 6, mRNA NM\_214710 Homo sapiens protease, serine-like 1 (PRSSL1), mRNA NM\_214711 Homo sapiens hypothetical LOC401137 (LOC401137), mRNA XM\_001279 Homo saplens phosphoprotein enriched in astrocytes 15 (PEA15), mRNA XM\_001290 Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 4 (ABC4 XM\_001296 Homo sapiens cytosolic acyl coenzyme A thioester hydrolase (HBACH), mRt XM\_001322 Homo sapiens coagulation factor III (thromboplastin, tissue factor) (F3), mRN XM\_001393 Homo sapiens peroxiredoxin 1 (PRDX1), mRNA XM\_001442 Homo saplens phosphoglucomutase 1 (PGM1), mRNA XM\_001463 Homo saplens ATPase, H+ transporting, lysosomal (vacuolar proton pump) 2 XM 001527 Homo sapiens polymyositis/scleroderma autoantigen 2 (100kD) (PMSCL2), r XM 001541 Homo sapiens heterogeneous nuclear ribonucleoprotein R (HNRPR), mRNA XM\_001607 Homo saplens growth arrest and DNA-damage-inducible, alpha (GADD45A), XM\_001644 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 8 (PPP1F XM\_001654 Homo saplens chromosome 1 open reading frame 8 (C1orf8), mRNA XM\_001655 Homo sapiens HSPCO34 protein (LOC51668), mRNA XM\_001677 Homo saplens involucrin (IVL), mRNA XM\_001690 Homo sapiens cytochrome b5 reductase 1 (B5R.1) (LOC51706), mRNA XM\_007651 Homo sapiens similar to Sorbitol dehydrogenase (L-iditol 2-dehydrogenase): XM\_010658 Homo saplens similar to protein phosphatase 1, regulatory (inhibitor) subunit XM\_012219 Homo sapiens similar to Phosphoglycerate mutase 1 (Phosphoglycerate mut XM 015334 Homo sapiens family with sequence similarity 10, member A3 (FAM10A3), m XM\_015717 Homo sapiens similar to 40S ribosomal protein S7 (S8) (LOC149224), mRN/ XM\_016093 Homo sapiens similar to eukaryotic initiation factor 5A isoform I variant A (LC XM\_016113 Homo sapiens similar to 40S ribosomal protein S10 (LOC158104), mRNA XM\_016532 Homo sapiens similar to hepatitis C virus core-binding protein 6; cervical can XM\_016548 Homo sapiens chromodomain protein, Y chromosome, 2 related (LOC20361 XM\_016713 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; \u03b1 XM 017374 Homo sapiens similar to Nonhistone chromosomal protein HMG-17 (High-mc XM\_017661 Homo sapiens similar to 40S ribosomal protein S26 (LOC158200), mRNA XM\_017966 Homo sapiens similar to Reticulon protein 3 (Neuroendocrine-specific proteir XM\_018399 Homo sapiens hypothetical protein LOC144983 (LOC144983), mRNA XM 018432 Homo sapiens similar to 60S ribosomal protein L7 (LOC146110), mRNA XM 018487 Homo sapiens similar to omega protein (LOC91353), mRNA XM\_027045 Homo sapiens cut-like 2 (Drosophila) (CUTL2), mRNA XM\_027074 Homo sapiens I(3)mbt-like 3 (Drosophila) (L3MBTL3), mRNA

XM\_027105 Homo sapiens KIAA0767 protein (KIAA0767), mRNA XM\_027162 Homo sapiens DMRT-like family A2 (DMRTA2), mRNA

XM 027236 Homo sapiens tetratricopeptide repeat domain 9 (TTC9), mRNA XM 027237 Homo sapiens mitogen-activated protein kinase kinase kinase 9 (MAP3K9), i XM\_027307 Homo sapiens pleckstrin homology domain containing, family G (with RhoGe XM 027330 Homo sapiens RNA-binding region (RNP1, RRM) containing 7 (RNPC7), mR XM 027658 Homo sapiens fibronectin type III domain containing 1 (FNDC1), mRNA XM 028067 Homo sapiens midnolin (MIDN), mRNA XM 028217 Homo sapiens hypothetical LOC90024 (LOC90024), mRNA XM 028253 Homo sapiens chromosome 19 open reading frame 7 (C19orf7), mRNA XM 028413 Homo sapiens KIAA1374 protein (KIAA1374), mRNA XM 028522 Homo sapiens myosin heavy chain Myr 8 (MYR8), mRNA XM 028810 Homo sapiens KIAA1755 protein (KIAA1755), mRNA XM 029084 Homo sapiens hypothetical protein FLJ21438 (FLJ21438), mRNA XM 029101 Homo sapiens KIAA0947 protein (KIAA0947), mRNA XM 029323 Homo sapiens hypothetical protein LOC90133 (LOC90133), mRNA XM 029353 Homo sapiens KIAA1509 (KIAA1509), mRNA XM 029429 Homo saplens KIAA1328 protein (KIAA1328), mRNA XM 029438 Homo sapiens KIAA0397 gene product (KIAA0397), mRNA XM 029805 Homo sapiens similar to ribosomal protein L7 (LOC90193), mRNA XM\_029962 Homo sapiens potassium channel, subfamily T, member 1 (KCNT1), mRNA XM\_030300 Homo sapiens netrin receptor Unc5h1 (KIAA1976), mRNA XM\_030378 Homo saplens zinc finger protein 527 (ZNF527), mRNA XM 030445 Home sapiens chromosome 10 open reading frame 75 (C10orf75), mRNA XM 030559 Homo sapiens par-6 partitioning defective 6 homolog beta (C. elegans) (PAF XM 030577 Homo sapiens ATPase, Class II, type 9A (ATP9A), mRNA XM 030665 Homo sapiens KIAA1229 protein (KIAA1229), mRNA XM 030669 Homo sapiens hypothetical protein LOC90288 (LOC90288), mRNA XM\_030729 Homo sapiens hypothetical protein DKFZp434I1117 (DKFZp434I1117), mRN XM 030892 Homo sapiens hypothetical protein LOC90317 (LOC90317), mRNA XM\_030893 Homo sapiens similar to ribosomal protein L37 (LOC147655), mRNA XM\_030896 Homo sapiens hypothetical protein LOC90321 (LOC90321), mRNA XM\_030958 Homo saplens hypothetical protein LOC90333 (LOC90333), mRNA XM 031009 Homo sapiens similar to fer-1 like protein 3 (LOC90342), mRNA XM 031102 Homo sapiens WD repeat domain 22 (WDR22), mRNA XM\_031104 Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylga XM\_031246 Homo sapiens roundabout, axon guidance receptor, homolog 2 (Drosophila) XM\_031342 Homo sapiens zinc finger, SWIM domain containing 4 (ZSWIM4), mRNA XM 031357 Homo sapiens KIAA0802 protein (KIAA0802), mRNA XM 031401 Homo sapiens EGF-like-domain, multiple 3 (EGFL3), mRNA XM 031553 Homo sapiens U2-associated SR140 protein (SR140), mRNA XM 031561 Homo sapiens TRAF4 associated factor 1 (FLJ14502), mRNA XM\_031689 Homo sapiens MAX gene associated (MGA), mRNA XM\_031706 Homo sapiens likely ortholog of mouse mitogen activated protein kinase binc XM\_031744 Homo sapiens START domain containing 9 (STARD9), mRNA XM\_031975 Homo sapiens similar to Ribulose-phosphate 3-epimerase (Ribulose-5-phosp XM 032059 Homo sapiens similar to BC37295\_3 (LOC90485), mRNA XM 032181 Homo sapiens KIAA1233 protein (KIAA1233), mRNA XM 032278 Homo saplens signal-induced proliferation-associated 1 like 3 (SIPA1L3), mF XM 032397 Homo sapiens DKFZP564I122 protein (DKFZP564I122), mRNA XM 032542 Homo sapiens FLJ41352 protein (FLJ41352), mRNA XM 032571 Homo sapiens KIAA0888 protein (KIAA0888), mRNA XM 032678 Homo sapiens hypothetical protein LOC90576 (LOC90576), mRNA XM 032693 Homo sapiens KIAA0420 gene product (KIAA0420), mRNA XM\_032812 Homo sapiens similar to hypothetical protein (LOC388506), mRNA XM 032901 Homo sapiens KIAA0226 gene product (KIAA0226), mRNA XM 032945 Homo sapiens chromosome 21 open reading frame 25 (C21orf25), mRNA

XM\_032996 Homo sapiens KIAA0819 protein (KIAA0819), mRNA
XM\_032997 Homo sapiens flavoprotein oxidoreductase MICAL3 (MICAL3), mRNA

XM 033113 Homo sapiens KIAA0789 gene product (KIAA0789), mRNA XM 033173 Homo sapiens protocadherin 19 (PCDH19), mRNA XM 033370 Homo sapiens zinc finger homeobox 2 (ZFHX2), mRNA XM 033371 Homo sapiens chromosome 14 open reading frame 120 (C14orf120), mRNA XM 033391 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 3E (PPP\* XM 033704 Homo sapiens cDNA DKFZp434C184 gene (DKFZp434C184), mRNA XM 033853 Homo sapiens hypothetical zinc finger protein FLJ20573 (FLJ20573), mRNA XM\_034086 Homo sapiens KIAA1107 protein (KIAA1107), mRNA XM\_034262 Homo sapiens KIAA1727 protein (KIAA1727), mRNA XM 034274 Homo sapiens v-myb myeloblastosis viral oncogene homolog (avian)-like 1 (I XM 034594 Homo sapiens KIAA1604 protein (KIAA1604), mRNA XM 034623 Homo sapiens similar to small nuclear ribonucleoprotein E (LOC158352), mF XM 034640 Homo sapiens similar to ribosomal protein L4; 60S ribosomal protein L4; hon XM 034717 Homo sapiens KIAA0493 protein (KIAA0493), mRNA XM 034819 Homo saplens KIAA0326 protein (KIAA0326), mRNA XM 034872 Homo sapiens septin 8 (SEPT8), mRNA XM 034904 Homo sapiens KIAA0912 protein (KIAA0912), mRNA XM\_035037 Home sapiens low density lipoprotein receptor-related protein 4 (LRP4), mRf XM\_035299 Homo sapiens zinc finger, SWIM domain containing 6 (ZSWIM6), mRNA XM\_035371 Homo sapiens KIAA1643 protein (KIAA1643), mRNA XM\_035405 Homo sapiens KIAA1384 protein (KIAA1384), mRNA XM 035497 Homo sapiens KIAA1602 protein (KIAA1602), mRNA XM 035527 Homo sapiens hypothetical protein FLJ10980 (FLJ10980), mRNA XM 035572 Homo sapiens chromosome 4 open reading frame 9 (C4orf9), mRNA XM 035601 Homo sapiens SAP90/PSD-95-associated protein 3 (SAPAP3), mRNA XM 035825 Homo sapiens KIAA0143 protein (KIAA0143), mRNA XM 035863 Homo sapiens zinc finger protein 37a (KOX 21) (ZNF37A), mRNA XM\_035946 Homo sapiens KIAA1613 protein (KIAA1613), mRNA XM 035953 Homo saplens chromosome 9 open reading frame 11 (C9orf11), mRNA XM 036115 Homo sapiens KIAA1753 protein (KIAA1753), mRNA XM 036218 Home sapiens zinc finger protein 506 (ZNF506), mRNA XM 036299 Homo sapiens KIAA1522 protein (KIAA1522), mRNA XM 036612 Homo sapiens hypothetical LOC91170 (LOC91170), mRNA XM 036708 Homo sapiens KIAA0368 (KIAA0368), mRNA XM 036729 Homo sapiens ubiquitin specific protease 41 (USP41), mRNA XM 036740 Homo sapiens nuclear pore membrane glycoprotein 210-like (LOC91181), m XM 036936 Homo sapiens KIAA1666 protein (KIAA1666), mRNA XM 036942 Homo sapiens similar to hypothetical protein (LOC150221), mRNA XM\_036988 Homo sapiens KIAA1000 protein (KIAA1000), mRNA XM\_037493 Homo sapiens SH3 and multiple ankyrin repeat domains 3 (SHANK3), mRNA XM 037523 Homo sapiens KIAA1076 protein (KIAA1076), mRNA XM\_037557 Homo sapiens KIAA0984 protein (KIAA0984), mRNA XM 037759 Homo sapiens KIAA0376 protein (KIAA0376), mRNA XM 037817 Homo sapiens hypothetical protein FLJ31033 (FLJ31033), mRNA XM 038063 Homo sapiens UDP-N-acteviolucosamine pyrophosphorylase 1-like 1 (UAP1 XM 038150 Homo sapiens microtubule associated serine/threonine kinase 3 (MAST3), m XM 038288 Homo sapiens KIAA0191 protein (KIAA0191), mRNA XM 038291 Homo sapiens hypothetical protein FLJ13456 (FLJ13456), mRNA XM 038298 Homo sapiens hypothetical protein DKFZp434E2321 (DKFZp434E2321), mF XM 038436 Homo sapiens KIAA1786 protein (KIAA1786), mRNA XM\_038520 Homo sapiens KIAA0542 gene product (KIAA0542), mRNA XM\_038567 Homo sapiens metastasis associated family, member 3 (MTA3), mRNA

XM\_038576 Homo sapiens hypothetical protein BC007901 (LOC91461), mRNA
XM\_038604 Homo sapiens unc-13 homolog A (C. elegans) (UNC13A), mRNA

XM\_038664 Homo sapiens KIAA0564 protein (KIAA0564), mRNA

XM\_038920 Homo sapiens Nedd4 binding protein 3 (N4BP3), mRNA

XM\_038999 Homo sapiens NEDD4-related E3 ubiquitin ligase NEDL2 (NEDL2), mRNA

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XM 039169 Homo sapiens KIAA1276 protein (KIAA1276), mRNA XM 039218 Homo sapiens similar to ribosomal protein S2; 40S ribosomal protein S2 (LO XM 039385 Homo sapiens KIAA1093 protein (KIAA1093), mRNA XM\_039393 Homo sapiens plexin A4 (PLXNA4), mRNA XM\_039495 Homo sapiens DNA segment, Chr 15, Wayne State University 75, expressed XM 039515 Homo sapiens G2 protein (G2), mRNA XM\_039548 Homo sapiens SMYD family member 5 (SMYD5), mRNA XM 039570 Homo sapiens SEC15-like 2 (S. cerevisiae) (SEC15L2), mRNA XM 039627 Homo sapiens contactin 3 (plasmacytoma associated) (CNTN3), mRNA XM 039676 Homo sapiens KIAA1240 protein (KIAA1240), mRNA XM 039698 Homo sapiens KIAA1432 (KIAA1432), mRNA XM\_039702 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; \ XM\_039721 Homo sapiens similar to MGC5244 protein (LOC91632), mRNA XM\_039733 Homo sapiens KIAA0953 (KIAA0953), mRNA XM\_039762 Homo sapiens myelin transcription factor 1-like (MYT1L), mRNA XM 039796 Homo sapiens Traf2 and NCK interacting kinase (KIAA0551), mRNA XM\_039877 Homo sapiens mucin 5, subtype B, tracheobronchial (MUC5B), mRNA XM\_039908 Homo saplens hypothetical protein BC007307 (LOC91664), mRNA XM\_039922 Homo sapiens similar to FLJ00050 protein (LOC401873), mRNA XM\_040149 Homo sapiens similar to E74-like factor 2 (ets domain transcription factor); no XM 040265 Homo sapiens KIAA0217 protein (KIAA0217), mRNA XM 040383 Homo sapiens KIAA1677 (KIAA1677), mRNA XM 040486 Homo sapiens KIAA1789 protein (KIAA1789), mRNA XM 040527 Homo sapiens tenascin N (TNN), mRNA XM\_040592 Homo sapiens zinc finger protein 469 (ZNF469), mRNA XM\_040910 Homo sapiens chromosome 14 open reading frame 73 (C14orf73), mRNA XM\_041018 Homo sapiens KIAA0367 (KIAA0367), mRNA XM 041020 Homo sapiens similar to protein 40kD (LOC158473), mRNA XM 041116 Homo sapiens chromosome 14 open reading frame 171 (C14orf171), mRNA XM 041126 Homo sapiens KIAA1486 protein (KIAA1486), mRNA XM 041162 Homo sapiens Nedd4 family interacting protein 2 (NDFIP2), mRNA XM 041191 Homo sapiens KIAA0931 protein (KIAA0931), mRNA XM\_041221 Homo sapiens similar to RNA-binding protein S1, serine-rich domain; SR pro XM\_041363 Homo sapiens likely ortholog of mouse semaF cytoplasmic domain associate XM\_041964 Homo sapiens KIAA0523 protein (KIAA0523), mRNA XM\_042066 Homo sapiens mitogen-activated protein kinase kinase kinase 1 (MAP3K1), ı XM\_042178 Homo sapiens similar to AKAP-binding sperm protein ropporin (LOC152015) XM\_042234 Homo sapiens similar to RIKEN cDNA 4933437K13 (LOC92017), mRNA XM 042301 Homo sapiens KIAA1546 protein (KIAA1546), mRNA XM 042323 Homo sapiens calmodulin binding transcription activator 1 (CAMTA1), mRNA XM\_042500 Homo sapiens similar to ribosomal protein S2; 40S ribosomal protein S2 (LO XM 042635 Homo sapiens KIAA1069 protein (KIAA1069), mRNA XM\_042661 Homo sapiens KIAA1530 protein (KIAA1530), mRNA XM\_042685 Homo sapiens KIAA1414 protein (KIAA1414), mRNA XM\_042698 Homo sapiens ubiquitin specific protease 22 (USP22), mRNA XM\_042833 Homo sapiens KIAA0295 protein (KIAA0295), mRNA XM\_042936 Homo sapiens glutamate receptor interacting protein 2 (GRIP2), mRNA XM\_042978 Homo sapiens KIAA1817 protein (KIAA1817), mRNA XM\_043118 Homo sapiens KIAA0286 protein (KIAA0286), mRNA XM\_043272 Homo sapiens KIAA0346 protein (KIAA0346), mRNA XM 043492 Homo sapiens KIAA1728 protein (KIAA1728), mRNA XM 043493 Homo sapiens synaptic vesicle protein 2C (SV2C), mRNA XM 043500 Homo sapiens similar to death-associated protein (LOC92196), mRNA XM 043613 Homo sapiens glutamate receptor, ionotropic, delta 1 (GRID1), mRNA

XM\_043624 Homo sapiens hypothetical protein DKFZp434E1822 (DKFZp434E1822), mF XM\_043653 Homo sapiens hypothetical protein FL110997 (FLJ10097), mRNA XM\_043739 Homo sapiens hypothetical cardiac/skeletal muscle-expressed ORF (LOC92:

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XM 043863 Homo sapiens hypothetical protein DKFZp434H2226 (DKFZp434H2226), mF XM 043979 Homo sapiens similar to FLJ12363 protein (LOC92267), mRNA XM 043989 Homo sapiens hypothetical protein LOC92270 (LOC92270), mRNA XM 044062 Homo sapiens hypothetical protein DKFZp761O2018 (DKFZp761O2018), ml XM 044166 Homo sapiens hypothetical protein LOC92312 (LOC92312), mRNA XM 044178 Homo sapiens KIAA1211 protein (KIAA1211), mRNA XM 044196 Homo sapiens DKFZP434C212 protein (DKFZP434C212), mRNA XM 044212 Homo sapiens KIAA1862 protein (KIAA1862), mRNA XM 044334 Homo sapiens RIM binding protein 2 (KIAA0318), mRNA XM 044434 Homo sapiens KIAA1458 protein (KIAA1458), mRNA XM 044461 Homo sapiens KIAA1102 protein (KIAA1102), mRNA XM 044580 Homo sapiens KIAA1024 protein (KIAA1024), mRNA XM\_044622 Homo sapiens collagen, type XIV, alpha 1 (undulin) (COL14A1), mRNA XM 044632 Homo sapiens KIAA0556 protein (KIAA0556), mRNA XM\_044727 Homo sapiens myotubularin related protein 7 (MTMR7), mRNA XM 044836 Homo sapiens KIAA1340 protein (KIAA1340), mRNA XM 044921 Homo saplens KIAA1442 protein (KIAA1442), mRNA XM 045086 Homo sapiens KIAA1764 protein (KIAA1764), mRNA XM 045113 Homo sapiens astrotactin (ASTN), mRNA XM 045271 Homo sapiens KIAA1580 protein (KIAA1580), mRNA XM 045283 Homo sapiens similar to IK cytokine; arginine/glutamic acid/aspartic acid rep XM 045290 Homo saplens similar to basic leucine zipper and W2 domains 1 (LOC15157 XM 045308 Homo sapiens PHD finger protein 19 (PHF19), mRNA XM 045421 Homo sapiens chromosome 20 open reading frame 194 (C20orf194), mRNA XM 045423 Homo sapiens KIAA0701 protein (KIAA0701), mRNA XM 045581 Homo sapiens likely ortholog of mouse 5-azacytidine induced gene 1 (AZI1), XM\_045705 Homo sapiens similar to homologue of MJD, high homology to a genomic se XM 045712 Homo sapiens KIAA0316 gene product (KIAA0316), mRNA XM 045787 Homo sapiens hypothetical protein LOC92558 (LOC92558), mRNA XM 045792 Homo sapiens GCN1 general control of amino-acid synthesis 1-like 1 (yeast) XM 045907 Homo sapiens KIAA1170 protein (KIAA1170), mRNA XM\_045911 Homo sapiens tomosyn-like (KIAA1006), mRNA XM 046099 Homo sapiens similar to small nuclear ribonucleoprotein E (LOC148064), mf XM 046264 Homo sapiens DKFZP434B172 protein (DKFZP434B172), mRNA XM 046305 Homo saplens KIAA1205 (KIAA1205), mRNA XM 046390 Homo sapiens zinc finger protein 473 (ZNF473), mRNA XM 046437 Homo sapiens chromosome 20 open reading frame 50 (C20orf50), mRNA XM 046531 Homo sapiens KIAA1614 protein (KIAA1614), mRNA XM 046570 Homo sapiens KIAA1679 protein (KIAA1679), mRNA XM 046581 Homo sapiens zinc finger, SWIM domain containing 5 (ZSWIM5), mRNA XM 046600 Homo sapiens KIAA1272 protein (KIAA1272), mRNA XM 046677 Homo sapiens solute carrier family 39 (zinc transporter), member 14 (SLC39 XM\_046685 Homo saplens KIAA1399 protein (KIAA1399), mRNA XM\_046751 Homo sapiens protein tyrosine phosphatase, receptor type, f polypeptide (PT XM 046808 Homo sapiens neurofascin (NFASC), mRNA XM 046861 Homo sapiens KRAB box containing C2H2 type zinc finger bA526D8.4 (BA5); XM 047025 Homo sapiens omithine aminotransferase-like 1 (OATL1), mRNA XM 047083 Homo sapiens similar to tubulin, beta 5 (LOC92755), mRNA XM 047214 Homo sapiens KIAA0930 protein (KIAA0930), mRNA XM 047325 Homo sapiens THO complex 2 (THOC2), mRNA XM 047355 Homo sapiens KIAA1765 protein (KIAA1765), mRNA XM 047357 Homo sapiens KIAA0342 gene product (KIAA0342), mRNA XM\_047462 Homo sapiens Spir-2 protein (Spir-2), mRNA XM\_047499 Homo sapiens hypothetical protein LOC149603 (LOC149603), mRNA XM 047550 Homo sapiens zinc finger protein 492 (ZNF492), mRNA XM\_047554 Homo sapiens similar to Zinc finger protein 492 (LOC148198), mRNA

XM 047610 Homo sapiens KIAA1086 (KIAA1086), mRNA

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XM 047617 Homo sapiens KIAA1349 protein (KIAA1349), mRNA XM 047707 Homo sapiens solute carrier family 39 (zinc transporter), member 10 (SLC39 XM 047734 Homo sapiens similar to hect domain and RLD 2 (LOC146489), mRNA XM 047770 Homo sapiens similar to alpha2-glucosyltransferase (LOC144245), mRNA XM 047995 Homo saniens odd Oz/ten-m homolog 2 (ODZ2), mRNA XM 048070 Homo sapiens zinc finger protein 292 (ZNF292), mRNA XM 048104 Homo sapiens filaggrin (FLG), mRNA XM 048128 Homo sapiens KIAA1596 (KIAA1596), mRNA XM\_048235 Homo sapiens Huntingtin interacting protein M (HYPM), mRNA XM 048362 Homo sapiens KIAA1543 (KIAA1543), mRNA XM 048462 Homo sapiens RUN and SH3 domain containing 2 (RUSC2), mRNA XM 048592 Homo sapiens KIAA1045 (KIAA1045), mRNA XM 048675 Homo sapiens KIAA1238 protein (KIAA1238), mRNA XM 048721 Homo sapiens hypothetical protein DKFZp762K222 (DKFZp762K222), mRN. XM\_048747 Homo sapiens KIAA1223 protein (KIAA1223), mRNA XM 048774 Homo sapiens KIAA1332 protein (KIAA1332), mRNA XM 048786 Homo sapiens KIAA1061 protein (KIAA1061), mRNA XM 048825 Homo saplens KIAA1026 protein (KIAA1026), mRNA XM 048898 Homo sapiens heat shock 70kDa protein 12A (HSPA12A), mRNA XM 049037 Homo sapiens trinucleotide repeat containing 9 (TNRC9), mRNA XM 049078 Homo sapiens KIAA1239 protein (KIAA1239), mRNA XM 049237 Homo sapiens KIAA0841 (KIAA0841), mRNA XM 049349 Homo sapiens KIAA0534 protein (KIAA0534), mRNA XM 049351 Homo sapiens KIAA1600 protein (KIAA1600), mRNA XM 049380 Homo sapiens KIAA0339 gene product (KIAA0339), mRNA XM 049384 Homo sapiens chromosome 7 open reading frame 3 (C7orf3), mRNA XM\_049575 Homo sapiens similar to succinate dehydrogenase flavoprotein subunit (LOC XM\_049619 Homo saplens PR domain containing 6 (PRDM6), mRNA XM\_049695 Homo sapiens vang-like 2 (van gogh, Drosophila) (VANGL2), mRNA XM 049952 Homo sapiens hypothetical protein FLJ23529 (FLJ23529), mRNA XM\_050041 Homo sapiens myosin ID (MYO1D), mRNA XM 050219 Homo sapiens synaptopodin 2 (SYNPO2), mRNA XM\_050278 Homo sapiens kinesin family member 26A (KIF26A), mRNA XM 050325 Homo sapiens KIAA1126 protein (KIAA1126), mRNA XM 050478 Homo sapiens KIAA1202 protein (KIAA1202), mRNA XM 050561 Homo saplens SIN3 homolog B, transcriptional regulator (yeast) (SIN3B), mF XM\_050564 Homo sapiens similar to RIKEN cDNA 2410004L22 gene (M. musculus) (MG XM\_050625 Homo sapiens secreted frizzled-related protein 2 (SFRP2), mRNA XM 050644 Homo sapiens KIAA1623 (KIAA1623), mRNA XM\_050846 Homo sapiens Indian hedgehog homolog (Drosophila) (IHH), mRNA XM\_051017 Homo sapiens KIAA0657 protein (KIAA0657), mRNA XM 051081 Homo sapiens KIAA0608 protein (KIAA0608), mRNA XM 051091 Homo sapiens KIAA1040 protein (KIAA1040), mRNA XM 051197 Homo sapiens KIAA1005 protein (KIAA1005), mRNA XM 051200 Homo sapiens fatso (FTO), mRNA XM\_051221 Homo sapiens SPHK1 (sphingosine kinase type 1) interacting protein (SKIP) XM 051264 Homo sapiens thioredoxin reductase 3 (TXNRD3), mRNA XM\_051271 Homo sapiens family with sequence similarity 10, member A6 (FAM10A6), m XM\_051699 Homo sapiens KIAA1344 (KIAA1344), mRNA XM\_051862 Homo sapiens hypothetical protein from EUROIMAGE 588495 (LOC58489), XM\_051956 Homo sapiens similar to KIAA0592 protein (LOC387680), mRNA XM 052561 Homo sapiens KIAA1337 protein (KIAA1337), mRNA XM\_052597 Homo sapiens ubiquitin specific protease 53 (USP53), mRNA XM 052620 Homo saplens mannosidase alpha class 2B member 2 (KIAA0935), mRNA

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XM 053074 Homo sapiens translocase of inner mitochondrial membrane 50 homolog (ye XM 053177 Homo saniens similar to alpha tubulin (LOC112714), mRNA

XM 053966 Homo sapiens hypothetical protein LOC113230 (LOC113230), mRNA

XM 054284 Homo sapiens alpha-tubulin isotype H2-alpha (H2-ALPHA), mRNA XM 054313 Homo sapiens similar to T-complex protein 1 (LOC155100), mRNA XM 054983 Homo sapiens KIAA1952 protein (KIAA1952), mRNA XM\_055095 Homo sapiens KIAA1906 protein (KIAA1906), mRNA XM 055481 Homo sapiens KIAA1915 protein (KIAA1915), mRNA XM 055636 Homo sapiens KIAA1912 protein (KIAA1912), mRNA XM\_055725 Homo sapiens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B; XM\_055866 Homo sapiens lemur tyrosine kinase 3 (LMTK3), mRNA XM 056254 Homo sapiens heparan sulfate (glucosamine) 3-Q-sulfotransferase 4 (HS3S) XM 056282 Homo sapiens KIAA1904 protein (KIAA1904), mRNA XM 056298 Homo sapiens KIAA1889 protein (KIAA1889), mRNA XM 056434 Homo sapiens tetratricopeptide repeat domain 6 (TTC6), mRNA XM 056455 Homo sapiens Melanoma associated gene (D2S448), mRNA XM 056680 Homo saniens hypothetical protein LOC115749 (LOC115749), mRNA XM 056681 Homo sapiens similar to ribosomal protein L14; 60S ribosomal protein L14 (L XM 057040 Homo saplens KIAA1922 protein (KIAA1922), mRNA XM\_057107 Homo sapiens KIAA1937 protein (KIAA1937), mRNA XM\_057296 Homo sapiens hypothetical protein LOC116064 (LOC116064), mRNA XM 058332 Homo sapiens similar to hypothetical protein MGC45962 (LOC118670), mRN XM 058335 Home saplens similar to ARF GTPase-activating protein (LOC118704), mRN XM 058404 Homo saplens hypothetical protein LOC119548 (LOC119548), mRNA XM 058426 Homo sapiens hypothetical protein FLJ00012 (FLJ00012), mRNA XM 058513 Homo sapiens hypothetical protein DKFZp434H2111 (DKFZp434H2111), mF XM 058581 Homo sapiens similar to hypothetical protein 9530023G02 (LOC121642), mF XM 058611 Homo saplens hypothetical LOC150928 (LOC150928), mRNA XM\_058628 Homo sapiens chromosome 14 open reading frame 109 (C14orf109), mRNA XM 058661 Home saplens chromosome 14 open reading frame 35 (C14or/35), mRNA XM 058677 Homo sapiens similar to 60S ribosomal protein L21 (LOC123031), mRNA XM 058719 Homo sapiens similar to RIKEN cDNA C630028N24 gene (LOC123688), mR XM\_058720 Homo sapiens similar to junction-mediating and regulatory protein p300 JMY XM\_058721 Homo sapiens hypothetical protein LOC123722 (LOC123722), mRNA XM 058743 Homo sapiens hypothetical protein LOC123876 (LOC123876), mRNA XM 058857 Homo sapiens hypothetical LOC124871 (LOC124871), mRNA XM 058879 Homo sapiens hypothetical protein LOC124976 (LOC124976), mRNA XM\_058931 Homo sapiens similar to hypothetical protein B230399E16 (LOC125704). mF XM\_058956 Homo sapiens Purklnje cell protein 2 (PCP2), mRNA XM 058961 Homo sapiens trafficking protein particle complex 5 (TRAPPC5), mRNA XM 058964 Homo sapiens hypothetical protein LOC89887 (LOC89887), mRNA XM\_058967 Homo sapiens similar to Elongation factor 1-delta (EF-1-delta) (Antigen NY-C XM 058997 Homo sapiens hypothetical protein LOC126167 (LOC126167), mRNA XM 058999 Homo sapiens hypothetical protein LOC126208 (LOC126208), mRNA XM 059037 Home saplens similar to LIM domains containing 1 (LOC126374), mRNA XM 059047 Homo sapiens hypothetical LOC126435 (LOC126435), mRNA XM 059051 Homo sapiens hypothetical protein LOC126520 (LOC126520), mRNA Homo sapiens hypothetical protein LOC126661 (LOC126661), mRNA XM 059061 XM\_059074 Homo saplens hypothetical protein LOC126755 (LOC126755), mRNA XM 059095 Homo sapiens formin binding protein 2 (FNBP2), mRNA XM 059104 Homo sapiens similar to CG5435-PA (LOC127003), mRNA XM\_059132 Homo sapiens similar to RIKEN cDNA 4930549C01 (LOC127309), mRNA XM 059140 Homo sapiens similar to dJ39G22.2 (novel protein) (LOC127391), mRNA XM 059166 Homo sapiens similar to KIAA1697 protein (LOC127602), mRNA XM\_059256 Homo sapiens hypothetical LOC128499 (LOC128499), mRNA XM 059267 Homo sapiens similar to RIKEN cDNA 2210009G21 (LOC128710), mRNA XM 059318 Homo sapiens KIAA1941 protein (KIAA1941), mRNA XM 059341 Homo sapiens hypothetical protein LOC129293 (LOC129293), mRNA

XM\_059396 Homo sapiens hypothetical LOC130063 (LOC130063), mRNA Homo sapiens similar to Calcium and integrin-binding protein 1 (Calmyrin) (C XM 059399 XM\_059438 Homo sapiens similar to CG14894-PA (LOC130502), mRNA XM 059461 Homo sapiens similar to RIKEN cDNA A230078I05 gene (LOC130612), mRN XM\_059462 Homo sapiens hypothetical LOC130643 (LOC130643), mRNA XM\_059473 Homo sapiens hypothetical LOC130839 (LOC130839), mRNA XM 059482 Homo sapiens FLJ00133 protein (FLJ00133), mRNA XM 059492 Homo sapiens hypothetical LOC131076 (LOC131076), mRNA XM\_059548 Homo sapiens similar to SRSR846 (LOC131920), mRNA XM 059578 Homo sapiens similar to hypothetical protein A430083B19 (LOC132203), mF XM 059598 Homo sapiens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B; XM 059608 Homo sapiens hypothetical LOC132870 (LOC132870), mRNA XM\_059617 Homo sapiens similar to MGC69138 protein (LOC132946), mRNA XM\_059669 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; \( \) XM\_059672 Homo sapiens hypothetical LOC133874 (LOC133874), mRNA XM 059689 Homo sapiens similar to 3110006E14Rik protein (LOC134111), mRNA XM\_059702 Homo sapiens hypothetical protein FLJ36748 (FLJ36748), mRNA XM\_059729 Homo sapiens interleukin-1 receptor-associated kinase 1 binding protein 1 (I XM\_059730 Homo sapiens chromosome 6 open reading frame 159 (C6orf159), mRNA XM\_059776 Homo sapiens FK506 binding protein 1C (FKBP1C), mRNA XM\_059830 Homo sapiens similar to RIKEN cDNA 1700016G05 (LOC136242), mRNA XM\_059832 Homo sapiens hypothetical protein LOC136288 (LOC136288), mRNA XM\_059909 Homo sapiens hypothetical LOC137485 (LOC137485), mRNA XM\_059923 Homo sapiens similar to Nuclear receptor binding factor-2 (LOC137829), mR XM\_059929 Homo sapiens hypothetical protein LOC137886 (LOC137886), mRNA XM\_059954 Homo saplens chromosome 9 open reading frame 57 (C9orf57), mRNA XM\_059956 Homo sapiens similar to RIKEN cDNA 1700028P14 (LOC138255), mRNA XM\_059972 Homo sapiens hypothetical protein LOC138428 (LOC138428), mRNA XM\_059987 Homo sapiens ankyrin repeat domain 19 (ANKRD19), mRNA XM\_060020 Homo sapiens hypothetical protein BC016683 (LOC139231), mRNA XM\_060054 Homo sapiens similar to XAGE-5 protein (LOC139793), mRNA XM 060087 Homo sapiens similar to template acylvating factor-I alpha (LOC126598), mF XM\_060104 Homo sapiens similar to RIKEN cDNA 5430400H23 (LOC126637), mRNA XM\_060171 Homo sapiens similar to erythrocyte membrane-associated giant protein anti-XM\_060278 Homo sapiens similar to tight junction protein 3 (zona occludens 3) (LOC126) XM\_080301 Homo sapiens similar to Olfactory receptor 2M6 (LOC127059), mRNA XM\_060303 Homo sapiens similar to Olfactory receptor 2M6 (LOC127062), mRNA XM\_060305 Homo sapiens similar to seven transmembrane helix receptor (LOC127064), XM\_060307 Homo sapiens similar to Olfactory receptor 5BF1 (LOC127066), mRNA XM\_080309 Homo sapiens similar to seven transmembrane hellx receptor (LOC127068), XM 060310 Homo sapiens similar to seven transmembrane helix receptor (LOC127069). XM\_060315 Homo sapiens similar to Olfactory receptor 2T4 (LOC127074), mRNA XM\_060316 Homo sapiens olfactory receptor, family 2, subfamily T, member 1 (OR2T1), XM\_060318 Homo sapiens similar to Olfactory receptor 2T11 (LOC127077), mRNA XM\_060328 Homo saplens similar to 60S ACIDIC RIBOSOMAL PROTEIN P1 (LOC1270) XM\_060417 Homo sapiens similar to 60S ribosomal protein L36 (LOC127295), mRNA XM\_060458 Homo sapiens similar to Olfactory receptor 10J5 (LOC127385), mRNA XM\_060509 Homo sapiens S100 calcium binding protein A7-like 2 (S100A7L2), mRNA XM\_060535 Homo saplens similar to ribosomal protein L18a; 60S ribosomal protein L18a XM\_060537 Homo sapiens similar to iGb3 synthase (LOC127550), mRNA XM\_060563 Homo sapiens similar to seven transmembrane helix receptor (LOC127608), XM\_060569 Homo sapiens similar to seven transmembrane helix receptor (LOC127614), XM\_060572 Homo sapiens similar to Olfactory receptor 5AV1 (LOC127617), mRNA XM 060580 Homo sapiens similar to offactory receptor GA x6K02SYYHDF-1415-2371 (L. XM 060597 Homo sapiens similar to zinc finger protein 135 (clone pHZ-17); zinc finger pr XM 060880 Homo sapiens similar to dJ675G8.1 (novel zinc finger protein) (LOC128208). XM\_060887 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC128192), mRI

XM\_060943 Homo sapiens similar to Nuclear transport factor 2 (NTF-2) (Placental protein XM 060945 Homo sapiens similar to Olfactory receptor 10T2 (LOC128360), mRNA XM 060951 Homo sapiens similar to Olfactory recentor 6P1 (LOC128366), mRNA XM\_060952 Homo sapiens similar to seven transmembrane helix receptor (LOC128367), XM 060953 Homo sapiens similar to Offactory receptor 10Z1 (LOC128368), mRNA XM 060955 Homo sapiens similar to seven transmembrane helix receptor (LOC128370), XM 060956 Homo sapiens similar to Offactory receptor 6K6 (LOC128371), mRNA XM 060957 Homo sapiens similar to Olfactory receptor 6N1 (LOC128372), mRNA XM 060970 Homo sapiens paired related homeobox-like 1 (PRRXL1), mRNA XM\_061055 Homo sapiens hypothetical protein FLJ32938 (FLJ32938), mRNA XM\_061222 Homo sapiens similar to hypothetical protein 9930115F20 (LOC118934), mR XM 061427 Home sapiens similar to Small nuclear ribonucleoprotein Sm D2 (snRNP con XM 061542 Homo sapiens similar to 40S ribosomal protein S8 (LOC119563), mRNA XM 061562 Homo sapiens similar to RIKEN cDNA 4632411J06 (LOC119593), mRNA XM\_061610 Homo sapiens similar to Olfactory receptor 52E2 (LOC119678), mRNA XM 061611 Homo sapiens similar to Offactory recentor 52J3 (LOC119679), mRNA XM 061614 Homo sapiens similar to Olfactory receptor 51L1 (LOC119682), mRNA XM 061619 Homo sapiens similar to Olfactory receptor 51A7 (LOC119687), mRNA XM 061624 Homo sapiens similar to Olfactory receptor 51S1 (LOC119692), mRNA XM 061626 Homo sapiens similar to Offactory receptor 51F2 (LOC119694), mRNA XM 061627 Homo sapiens similar to Offactory receptor 52R1 (LOC119695), mRNA XM 061628 Homo sapiens similar to seven transmembrane helix receptor (LOC119696), XM\_061656 Homo sapiens similar to olfactory receptor MOR232-3 (LOC119749), mRNA XM 061666 Homo saniens similar to Olfactory recentor 4X2 (LOC119764), mRNA XM 061674 Homo sapiens similar to seven transmembrane helix receptor (LOC119772). XM 061676 Homo sapiens similar to Olfactory receptor 52K2 (LOC119774), mRNA XM 061677 Homo sapiens similar to seven transmembrane helix receptor (LOC119775). XM 061849 Homo sapiens similar to FLJ10251 protein (LOC120082), mRNA XM 061864 Homo sapiens similar to fat3; fat3 protein (LOC120105), mRNA XM 061871 Homo sapiens FAT tumor suppressor homolog 3 (Drosophila) (FAT3), mRNA XM\_061880 Homo sapiens similar to autoantigen NOR-90 (LOC120126), mRNA XM 061888 Homo sapiens similar to autoantigen NOR-90 (LOC120144), mRNA XM\_061890 Homo sapiens similar to tripartite motif-containing 43 (LOC120146), mRNA XM\_061930 Homo sapiens similar to Homeobox protein DBX1 (LOC120237), mRNA XM\_062025 Homo sapiens similar to Hnrpa1 protein (LOC120364), mRNA XM 062162 Homo sapiens similar to Olfactory receptor 812 (LOC120586), mRNA XM 062263 Homo sapiens similar to seven transmembrane helix receptor (LOC120787). XM 062269 Homo sapiens similar to Olfactory receptor 56A4 (LOC120793), mRNA XM 062272 Homo saplens similar to Olfactory receptor 56A1 (LOC120796), mRNA XM 062285 Homo sapiens similar to Olfactory receptor 2D3 (LOC120775), mRNA XM 062286 Homo sapiens similar to seven transmembrane helix receptor (LOC120776), XM 062300 Homo sapiens similar to RING finger protein 18 (Testis-specific ring-finger pr XM 062437 Homo sapiens similar to Keratin, type I cytoskeletal 18 (Cytokeratin 18) (K18 XM 062467 Homo sapiens similar to seven transmembrane helix receptor (LOC121129), XM\_062468 Homo sapiens similar to seven transmembrane helix receptor (LOC121130), XM 062520 Homo sapiens similar to Sucrase-isomaltase, intestinal (LOC121216), mRNA XM 062553 Homo sapiens similar to Offactory receptor 10AD1 (LOC121275), mRNA XM 062594 Homo sapiens similar to seven transmembrane helix receptor (LOC121360), XM 062598 Homo sapiens similar to Olfactory receptor 10A7 (LOC121364), mRNA XM 062645 Homo sapiens similar to solute carrier family 9, member 7; nonselective sodi XM 062735 Homo sapiens forkhead box N4 (FOXN4), mRNA XM 062788 Homo sapiens similar to histidine-rich protein (LOC121792), mRNA XM 062871 Homo sapiens hypothetical protein FLJ40176 (FLJ40176), mRNA XM 062872 Homo sapiens hypothetical protein LOC121952 (LOC121952), mRNA XM 062890 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC121981), mRI XM 062912 Homo sapiens similar to Mitochondrial import receptor subunit TOM22 homol XM 062966 Homo sapiens similar to MAP/microtubule affinity-regulating kinase 3 (LOC1:

XM\_063084 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC1223 XM 063123 Homo sapiens similar to hypothetical protein ZC477.8 - Caenorhabditis elega XM\_063138 Homo sapiens similar to RIKEN cDNA 1110013H04 (LOC122438), mRNA XM\_063202 Homo sapiens similar to 60S ribosomal protein L23a (LOC122585), mRNA XM\_063287 Homo sapiens similar to RIKEN cDNA 5830406J20 (LOC122706), mRNA XM\_063308 Homo sapiens similar to Olfactory receptor 4K14 (LOC122740), mRNA XM 063310 Homo sapiens similar to Olfactory receptor 4L1 (LOC122742), mRNA XM 063315 Homo sapiens similar to Olfactory receptor 11H6 (LOC122748), mRNA XM 063336 Homo sapiens similar to cytochrome c oxidase subunit IV (COXIV) pseudoge XM\_063481 Homo sapiens similar to hypothetical gene supported by AK044523 (LOC123 XM\_063630 Homo sapiens similar to 60S ribosomal protein L29 (Cell surface heparin bln XM\_063871 Homo sapiens similar to ENSANGP00000013733 (LOC123855), mRNA XM\_063919 Homo sapiens similar to neuronal nonacettycholine binding subunit (LOC123 XM 064003 Homo sapiens similar to KIAA0565 protein (LOC124149), mRNA XM\_064062 Homo sapiens similar to putative G-protein coupled receptor (LOC124274), r XM 064152 Homo sapiens sarcalumenin (SRL), mRNA XM 064177 Homo sapiens similar to Olfactory receptor 4D2 (LOC124538), mRNA XM\_064190 Homo sapiens hypothetical protein FLJ40311 (FLJ40311), mRNA XM 064257 Homo saptens similar to HESB like domain containing 2 (LOC124667), mRN XM 064265 Homo sapiens similar to smooth muscle and non-muscle myosin alkali light c XM\_064298 Homo sapiens hypothetical protein LOC124751 (LOC124751), mRNA XM\_064333 Homo sapiens hypothetical protein LOC124842 (LOC124842), mRNA XM\_064689 Homo sapiens hypothetical LOC125595 (LOC125595), mRNA XM\_064856 Homo sapiens hypothetical protein LOC125893 (LOC125893), mRNA XM\_064859 Homo sapiens similar to 40S ribosomal protein S15a (LOC125910), mRNA XM\_064865 Homo sapiens zinc finger protein 543 (ZNF543), mRNA XM\_064879 Homo sapiens similar to seven transmembrane helix receptor (LOC125958), XM 064883 Homo sapiens similar to Olfactory receptor 7G1 (Olfactory receptor 19-15) (C XM\_064884 Homo sapiens similar to Olfactory receptor 1M1 (Olfactory receptor 19-6) (OI XM\_064903 Homo sapiens similar to KIAA2033 protein (LOC126017), mRNA XM\_065006 Homo sapiens similar to ribosomal protein S4, X-linked (LOC126235), mRNA XM\_065026 Homo sapiens similar to FKSG27 (LOC126298), mRNA XM\_065050 Homo sapiens similar to Olfactory receptor 111 (Olfactory receptor 19-20) (OI XM\_065124 Homo sapiens similar to zinc finger protein 91 (HPF7, HTF10) (LOC126502), XM\_065153 Homo sapiens similar to Olfactory receptor 10H4 (LOC126541), mRNA XM\_065166 Homo sapiens KIAA1957 (KIAA1957), mRNA XM\_065237 Homo sapiens similar to FKSG30 (LOC129439), mRNA XM\_065278 Homo saplens similar to hypothetical protein (LOC129521), mRNA XM\_065316 Homo sapiens similar to acidic integral membrane protein (LOC129614), mR XM\_065332 Homo sapiens similar to MECT1 protein (LOC129656), mRNA XM 065348 Homo sapiens caspr5 protein (caspr5), mRNA XM\_065416 Homo sapiens similar to fibulin 1 isoform C precursor (LOC129804), mRNA XM\_065445 Homo sapiens similar to autoantigen NOR-90 (LOC129870), mRNA XM\_065555 Homo sapiens similar to Olfactory receptor 9A4 (LOC130075), mRNA XM\_065722 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM\_065743 Homo sapiens similar to SWI/SNF-related matrix-associated actin-dependent XM\_065750 Homo sapiens similar to Uncharacterized hematopoietic stem/progenitor cell-XM\_065828 Homo sapiens similar to 60S acidic ribosomal protein P1 (LOC130678), mRN XM\_065899 Homo sapiens similar to 60S ribosomal protein L23a (LOC130773), mRNA XM\_065998 Homo sapiens chromosome 20 open reading frame 148 (C20orf148), mRNA XM\_066003 Homo sapiens chromosome 20 open reading frame 122 (C20orf122), mRNA XM\_066040 Homo sapiens ribosomal protein S4-like (RPS4L), mRNA XM 066058 Homo sapiens chromosome 20 open reading frame 174 (C20orf174), mRNA XM\_066069 Homo sapiens similar to hypothetical protein (LOC128629), mRNA XM\_066102 Homo sapiens ribosomal protein L7a like 2 (RPL7AL2), mRNA XM\_066139 Homo sapiens ribosomal protein L7a-like 3 (RPL7AL3), mRNA

XM\_066162 Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleo

- XM 066176 Homo sapiens similar to bA218C14.1 (novel protein similar to mouse cystatir XM\_066177 Homo sapiens similar to bA218C14.1 (novel protein similar to mouse cystating XM 066189 Homo sapiens gamma-glutamyttransferase-like activity 3 (GGTLA3), mRNA XM\_066243 Homo sapiens hypothetical LOC128939 (LOC128939), mRNA XM\_066339 Homo sapiens hypothetical protein similar to topoisomerase (DNA) III beta (F XM\_066350 Homo sapiens similar to Ovis aries Y chromosome repeat region OY11.1 (3'C XM\_066351 Homo sapiens hypothetical gene similar to gamma-glutamyttransferase-like a XM 066443 Homo sapiens similar to hypothetical protein MGC15827 (LOC139046), mRN XM 066452 Homo sapiens similar to plasmolipin (LOC139061), mRNA XM 066457 Homo sapiens similar to SPANX N member 2 (LOC139067), mRNA XM 066469 Homo sapiens similar to MAGE family testis and tumor-specific protein (LOC XM\_066484 Homo sapiens similar to testis expressed sequence 13A (LOC139116), mRN XM\_066534 Homo sapiens similar to Diacylglycerol kinase, delta (Diglycende kinase) (DC XM\_066585 Homo sapiens similar to testis expressed sequence 13A (LOC139263), mRN XM\_066621 Homo sapiens similar to envelope protein (LOC139302), mRNA XM\_066685 Homo sapiens similar to KIAA1387 protein (LOC139420), mRNA XM\_066690 Homo sapiens similar to H326 (LOC139425), mRNA XM\_066695 Homo saplens similar to ferritin heavy chain - chicken (LOC139431), mRNA XM\_066701 Homo sapiens similar to melanoma antigen, family B, 4; melanoma-associate XM\_066752 Homo sapiens similar to E2F transcription factor 6 isoform a (LOC139542), n XM\_066765 Homo sapiens similar to bA351K23.4 (novel protein) (LOC139562), mRNA XM 066859 Homo sapiens similar to zinc finger protein 92 (LOC139735), mRNA XM 066946 Homo saplens hypothetical protein LOC139886 (LOC139886), mRNA XM\_067076 Homo sapiens similar to testis specific protein, Y-linked (LOC140103), mRN/ XM\_067176 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC131055), mRI XM\_067193 Homo sapiens similar to microtubule-associated protein 6 (LOC131086), mR XM\_067228 Homo sapiens similar to otolin-1 (LOC131149), mRNA XM\_067369 Homo sapiens similar to abnormal cell LINeage LIN-41, heterochronic gene; XM\_067448 Homo sapiens similar to MEST (LOC131572), mRNA XM\_067503 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC131691), mRI XM\_067585 Homo sapiens hypothetical protein LOC131873 (LOC131873), mRNA XM\_067605 Homo sapiens similar to hypothetical protein (LOC131909), mRNA XM\_067904 Homo sapiens similar to Transcription factor BTF3 homolog 3 (LOC132556), XM\_067994 Homo saplens similar to heat shock factor binding protein 1 (LOC132706), m XM\_068121 Homo sapiens similar to homenn (LOC132969), mRNA XM\_068229 Homo sapiens similar to 9530003A05 protein (LOC133185), mRNA XM\_068430 Homo sapiens similar to 60S acidic ribosomal protein P1 (LOC133609), mRt
- XM\_068602 Homo sapiens hypothetical LOC133923 (LOC133923), mRNA
- XM\_068632 Homo sapiens similar to hypothetical protein MGC52498 (LOC133993), mRN XM\_068681 Homo sapiens similar to seven transmembrane helix receptor (LOC134082).
- XM\_068682 Homo sapiens similar to Olfactory receptor 2Y1 (LOC134083), mRNA
- XM 068889 Homo sapiens similar to eukaryotic translation initiation factor 3 subunit k; mi
- XM\_068903 Homo sapiens similar to Ten-m2 (LOC134541), mRNA XM\_069035 Homo sapiens chromosome 6 open reading frame 213 (C6orf213), mRNA
- XM\_069595 Homo sapiens similar to Olfactory receptor 4F3 (LOC135896), mRNA
- XM\_069609 Homo sapiens similar to Olfactory receptor 9A2 (LOC135924), mRNA
- XM\_069612 Homo sapiens similar to OG-2 homeodomain protein-like; similar to U65067
- XM 069616 Homo sapiens similar to seven transmembrane helix receptor (LOC135941), XM 069619 Homo sapiens similar to olfactory receptor MOR261-13 (LOC135944), mRN/
- XM\_069621 Homo sapiens similar to Offactory receptor 6B1 (Offactory receptor 7-3) (OR; XM\_069623 Homo sapiens similar to Olfactory receptor 2F2 (Olfactory receptor 7-1) (OR;
- XM\_069728 Homo sapiens similar to beta-glucuronidase (LOC136132), mRNA
- XM\_069734 Homo sapiens similar to ribosomal protein L18; 60S ribosomal protein L18 (L XM\_069743 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC136157), mRNA
- XM\_069842 Homo sapiens similar to 60S ribosomal protein L15 (LOC136321), mRNA
- XM\_070233 Homo sapiens similar to ribosomal protein L10a (LOC137107), mRNA
- XM\_070277 Homo sapiens otoconin 90 (OC90), mRNA

XM 070619 Homo sapiens similar to homeobox protein NKX2-6 (LOC137814), mRNA XM 071013 Homo sapiens similar to bA62C3.1 (similar to testicular serine protease) (LO XM 071061 Homo sapiens AT rich interactive domain 3C (BRIGHT- like) (ARID3C), mRN XM 071093 Homo sapiens similar to Olfactory receptor 13C5 (LOC138799), mRNA XM 071096 Homo sapiens similar to Olfactory receptor 13C8 (LOC138802), mRNA XM 071097 Homo sapiens similar to Olfactory receptor 13C3 (LOC138803), mRNA XM 071098 Homo sapiens similar to Olfactory receptor 13C4 (LOC138804), mRNA XM\_071099 Homo sapiens similar to Olfactory receptor 13F1 (LOC138805), mRNA XM 071150 Homo sapiens similar to Olfactory receptor 1L8 (LOC138881), mRNA XM 071151 Homo sapiens similar to Olfactory receptor 1N2 (LOC138882), mRNA XM 071173 Homo sapiens similar to Hkr1p (LOC138932), mRNA XM 071201 Homo sapiens similar to Centaurin gamma 2 (LOC138972), mRNA XM 071712 Homo sapiens hypothetical protein LOC120376 (LOC120376), mRNA XM 071793 Homo sapiens chromosome 14 open reading frame 28 (C14orf28), mRNA XM 071866 Homo sapiens cerebellar degeneration-related protein 2, 62kDa (CDR2), mR XM 072402 Homo sapiens aminoacylase 1-like 2 (ACY1L2), mRNA XM 072554 Homo sapiens similar to RIKEN cDNA 4833436C18 gene (LOC138729), mR XM\_084000 Homo sapiens mitochondrial carrier triple repeat 2 (MCART2), mRNA XM\_084357 Homo sapiens similar to Hypothetical protein MGC56918 (LOC142827), mR1 XM\_084377 Homo sapiens similar to Triacylglycerol lipase, gastric precursor (Gastric lipa XM\_084445 Homo sapiens similar to ARF GTPase-activating protein (LOC143158), mRN XM\_084467 Homo sapiens similar to eukaryotic initiation factor 5A isoform I variant A (LC XM\_084482 Homo sapiens AT rich interactive domain 5B (MRF1-like) (ARID5B), mRNA XM 084514 Homo sapiens heat shock 90kDa protein 1, alpha-like 3 (HSPCAL3), mRNA XM 084529 Homo sapiens KIAA0298 gene product (KIAA0298), mRNA XM 084530 Homo sapiens KIAA0033 protein (KIAA0033), mRNA XM 084578 Homo sapiens PTPRF interacting protein, binding protein 2 (liprin beta 2) (PF XM 084672 Homo saplens similar to CDNA sequence BC021608 (LOC143941), mRNA XM 084845 Homo sapiens similar to Interferon-induced transmembrane protein 3 (Interfe XM\_084852 Homo sapiens hypothetical LOC144404 (LOC144404), mRNA XM\_084868 Homo sapiens similar to MGC76214 protein (LOC144448), mRNA XM\_084990 Homo sapiens hypothetical LOC144962 (LOC144962), mRNA XM\_085028 Homo sapiens ATPase, Class VI, type 11A (ATP11A), mRNA XM 085127 Homo sapiens KIAA0599 (KIAA0599), mRNA XM 085138 Homo sapiens similar to ribosomal protein L3; 60S ribosomal protein L3; HIV XM 085175 Homo sapiens tetratricopeptide repeat domain 7 like 1 (TTC7L1), mRNA XM 085200 Homo saplens hypothetical LOC145660 (LOC145660), mRNA XM 085231 Homo sapiens hypothetical protein LOC145783 (LOC145783), mRNA XM 085234 Homo sapiens unc-13 homolog C (C. elegans) (UNC13C), mRNA XM\_085236 Homo sapiens hypothetical LOC145788 (LOC145788). mRNA XM 085261 Homo saplens mesoderm posterior 2 (MESP2), mRNA XM 085290 Homo sapiens similar to goldin-67 isoform c (LOC145988), mRNA XM 085316 Homo sapiens similar to RIKEN cDNA 1810007E14; EST AA238765 (LOC14 XM 085347 Homo sapiens similar to hypothetical protein FLJ10815 (LOC146167), mRN/ XM 085367 Homo saplens FLJ40162 protein (FLJ40162), mRNA XM 085375 Homo sapiens zinc finger protein 90 homolog (mouse) (ZFP90), mRNA XM 085383 Homo sapiens hypothetical protein LOC146206 (LOC146206), mRNA XM 085463 Homo sapiens similar to CDNA sequence BC038613 (LOC146439), mRNA XM 085507 Homo sapiens zinc finger protein 500 (ZNF500), mRNA XM 085517 Homo sapiens hypothetical LOC146599 (LOC146599), mRNA XM\_085578 Homo sapiens FLJ46675 protein (FLJ46675), mRNA XM\_085596 Homo sapiens zinc finger protein 18 (KOX 11) (ZNF18), mRNA XM 085606 Homo sapiens similar to CDRT15 protein (LOC146822), mRNA XM 085634 Homo sapiens hypothetical protein LOC146909 (LOC146909), mRNA XM 085689 Homo sapiens potassium channel tetramerisation domain containing 11 (KC)

XM\_085722 Homo sapiens similar to Tripartite motif protein 16 (Estrogen-responsive B bt XM\_085724 Homo sapiens hypothetical LOC147151 (LOC147151), mRNA

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XM 085775 Homo sapiens similar to 60S ribosomal protein L7a (Surfeit locus protein 3) ( XM 085777 Homo sapiens similar to additional sex combs like 2; polycomb group protein XM 085824 Homo sapiens hypothetical protein LOC147650 (LOC147650), mRNA XM 085830 Homo sapiens hypothetical LOC147649 (LOC147649), mRNA XM 085831 Homo sapiens hypothetical protein LOC147645 (LOC147645), mRNA XM 085833 Homo sapiens hypothetical protein LOC147646 (LOC147646), mRNA XM 085836 Homo sapiens KIAA1956 protein (KIAA1956), mRNA XM\_085851 Homo sapiens similar to zinc finger protein 285 (LOC147711), mRNA XM 085870 Homo sapiens similar to complement C3 protein (GPC3) precursor (LOC147 XM 085929 Homo sapiens Meis1, myeloid ecotropic viral integration site 1 homolog 3 (m-XM\_085932 Homo sapiens similar to VPRI645 (LOC147920), mRNA XM\_085967 Homo sapiens hypothetical LOC147942 (LOC147942), mRNA XM 086001 Homo sapiens similar to Placental tissue protein 13 (Placenta protein 13) (Gr XM\_086046 Homo sapiens hypothetical protein FLJ30663 (FLJ30663), mRNA XM 086095 Homo sapiens hypothetical protein LOC148203 (LOC148203), mRNA XM 086186 Homo sapiens hypothetical protein FLJ13815 (FLJ13815), mRNA XM 086188 Homo sapiens dnaj-like protein (LOC148418), mRNA XM 086257 Homo sapiens similar to ribosomal protein S15; rat insulinoma gene (LOC14: XM 086287 Homo sapiens similar to Osteotesticular phosphatase; protein tyrosine phosp XM\_086308 Homo saplens hypothetical LOC148766 (LOC148766), mRNA XM\_086343 Homo sapiens similar to 60S ribosomal protein L17 (L23) (LOC148854), mRI XM 086344 Homo sapiens similar to LIM homeo domain transcription factor (LOC148864 XM 086360 Homo sapiens hypothetical LOC148915 (LOC148915), mRNA XM 086402 Homo sapiens hypothetical LOC149018 (LOC149018), mRNA XM 086409 Homo sapiens KIAA2025 protein (KIAA2025), mRNA XM 086494 Homo sapiens similar to similarity to monoubiquitin/carboxy-extension protein XM 086604 Homo sapiens similar to CHIA protein (LOC149620), mRNA XM 086616 Homo sapiens hypothetical LOC149643 (LOC149643), mRNA XM 086622 Homo sapiens hypothetical LOC149659 (LOC149659), mRNA XM 086637 Homo sapiens similar to RIKEN cDNA 1700049M11 (LOC149709), mRNA XM 086648 Home sapiens similar to dJ579F20.1 (high-mobility group (nonhistone chrom XM\_086650 Homo sapiens protein phosphatase 4, regulatory subunit 1-like (PPP4R1L), r XM\_086725 Homo saplens similar to bB329D4.2.1 (novel protein similar to a truncated nu XM\_086732 Homo sapiens hypothetical LOC149950 (LOC149950), mRNA XM 086761 Homo sapiens hypothetical protein LOC150084 (LOC150084), mRNA XM 086826 Homo sapiens hypothetical protein LOC150368 (LOC150368), mRNA XM\_086876 Homo saplens similar to MGC5244 protein (LOC150207), mRNA XM\_086879 Homo sapiens hypothetical LOC150371 (LOC150371), mRNA XM 086894 Homo sapiens hypothetical protein LOC150297 (LOC150297), mRNA XM 086905 Homo sapiens similar to RIKEN cDNA 2210021J22 (LOC150383), mRNA XM 086931 Homo sapiens similar to epsilon isoform of 14-3-3 protein (LOC150498), mRI XM\_086937 Homo sapiens similar to hypothetical protein A230046P18 (LOC150519), mF XM 086996 Homo sapiens hypothetical protein LOC150763 (LOC150763), mRNA XM 087056 Homo sapiens KIAA1841 protein (KIAA1841), mRNA XM\_087062 Homo sapiens similar to 60S acidic nbosomal protein P1 (LOC150978), mRN XM 087089 Homo sapiens KIAA0007 protein (KIAA0007), mRNA XM 087097 Homo sapiens hypothetical LOC151111 (LOC151111), mRNA XM 087137 Homo sapiens protein phosphatase 1 regulatory subunit 1A (LOC151242), m Homo sapiens hypothetical LOC151256 (LOC151256), mRNA XM 087141 XM 087167 Homo sapiens similar to KIAA1641 protein (LOC389008), mRNA XM\_087171 Homo sapiens myeloid-associated differentiation marker-like (MYADML), mR XM\_087182 Homo sapiens hypothetical LOC151363 (LOC151363), mRNA XM\_087200 Homo sapiens hypothetical LOC151443 (LOC151443), mRNA XM\_087208 Homo sapiens hypothetical LOC151451 (LOC151451), mRNA XM 087225 Homo sapiens similar to male-specific lethal 3-like 1 isoform a; drosophila M:

XM\_087254 Homo sapiens ATPase, Class VI, type 11B (ATP11B), mRNA
XM 087353 Homo sapiens KIAA0794 protein (KIAA0794), mRNA

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XM\_087384 Homo sapiens hypothetical protein LOC152098 (LOC152098), mRNA XM\_087386 Homo sapiens HEG homolog (HEG), mRNA XM\_087483 Homo sapiens hypothetical protein LOC152519 (LOC152519), mRNA XM\_087490 Homo sapiens similar to RIKEN cDNA 4933434I20 (LOC152586), mRNA XM 087499 Homo sapiens similar to 60S ribosomal protein L7a (Surfeit locus protein 3) ( XM\_087500 Homo sapiens similar to NEFA-interacting nuclear protein NIP30 (LOC15266 XM\_087553 Homo sapiens similar to WW45 protein (LOC152891), mRNA XM\_087593 Homo sapiens KIAA1430 protein (KIAA1430), mRNA XM\_087671 Homo sapiens hypothetical LOC153441 (LOC153441), mRNA XM\_087672 Homo sapiens KlAA1935 protein (KIAA1935), mRNA XM\_087761 Homo sapiens similar to protein related with psoriasis (LOC153770), mRNA XM 087762 Homo sapiens hypothetical LOC153778 (LOC153778), mRNA XM\_087800 Homo sapiens similar to CGI-62 protein (LOC153918), mRNA XM 087804 Homo sapiens synaptotagmin-like 3 (SYTL3), mRNA XM\_087859 Homo sapiens similar to 60S ribosomal protein L21 (LOC154165), mRNA XM\_087901 Homo sapiens similar to RIKEN cDNA 2410004A20 (LOC154288), mRNA XM\_087928 Homo saplens hypothetical protein LOC154449 (LOC154449), mRNA XM 088066 Homo sapiens similar to 60S ribosomal protein L35 (LOC154880), mRNA XM\_088072 Homo sapiens hypothetical LOC154907 (LOC154907), mRNA XM\_088118 Homo saplens family with sequence similarity 10, member A7 (FAM10A7), m XM\_088140 Homo sapiens hypothetical protein LOC155054 (LOC155054), mRNA XM\_088142 Homo sapiens chromosome 7 open reading frame 32 (C7orf32), mRNA XM\_088143 Homo sapiens similar to hypothetical protein 4931409K22 (LOC155046), mR XM\_088315 Homo sapiens KIAA0870 protein (KIAA0870), mRNA XM\_088331 Homo sapiens hypothetical protein LOC157570 (LOC157570), mRNA XM\_088367 Homo sapiens similar to SPC18 protein (LOC157708), mRNA XM\_088376 Homo sapiens chromosome 8 open reading frame 7 (C8orf7), mRNA XM\_088459 Homo sapiens KIAA0310 (KIAA0310), mRNA XM\_088491 Homo sapiens similar to Olfactory receptor 1Q1 (Olfactory receptor TPCR10) XM\_088516 Homo sapiens hypothetical LOC158226 (LOC158226), mRNA XM\_088525 Homo sapiens chromosome 9 open reading frame 28 (C9orf28), mRNA XM\_088551 Homo sapiens KIAA2026 (KIAA2026), mRNA XM\_088566 Homo sapiens KIAA1958 (KIAA1958), mRNA XM\_088567 Homo sapiens zinc finger protein 483 (ZNF483), mRNA XM\_088578 Homo sapiens RAD26L hypothetical protein, alternatively spliced product; sir XM\_088636 Homo sapiens cylicin, basic protein of sperm head cytoskeleton 1 (CYLC1), I XM 088677 Homo sapiens similar to UPF3 regulator of nonsense transcripts homolog Bi XM 088679 Homo sapiens hypothetical LOC158812 (LOC158812), mRNA XM\_088680 Homo sapiens hypothetical LOC158813 (LOC158813), mRNA XM\_088683 Homo sapiens similar to bA351K23.5 (novel protein) (LOC158835), mRNA XM\_088684 Homo saplens similar to Ab2-183 (LOC158830), mRNA XM\_088686 Homo sapiens hypothetical LOC158825 (LOC158825), mRNA XM\_088691 Homo sapiens hypothetical protein LOC158833 (LOC158833), mRNA XM\_088726 Homo sapiens hypothetical LOC158957 (LOC158957), mRNA XM\_088735 Homo sapiens hypothetical protein LOC158983 (LOC158983), mRNA XM\_088768 Homo sapiens similar to F-box only protein 25 (LOC159176), mRNA XM 088797 Homo sapiens similar to BC035954 protein (LOC163301), mRNA XM\_088817 Homo sapiens similar to Hypothetical protein DJ845O24.1 (LOC374949), mF XM\_088951 Homo sapiens olfactomedin 3 (OLFM3), mRNA XM\_089081 Homo sapiens deleted in neuroblastoma 5 (DNB5), mRNA XM\_089243 Homo sapiens similar to cDNA sequence BC022623 (LOC163933), mRNA XM\_089281 Homo sapiens similar to AD-003 protein (LOC149281), mRNA XM\_089307 Homo sapiens similar to implantation-related RGS2-like protein (LOC164036 XM\_089384 Homo sapiens similar to RIKEN cDNA A430025D11 (LOC164118), mRNA XM\_089747 Homo sapiens hypothetical protein FLJ35908 (FLJ35908), mRNA

XM\_089858 Homo sapiens similar to Olfactory receptor 52B4 (LOC143496), mRNA XM 089863 Homo sapiens similar to Olfactory receptor 52I2 (LOC143502), mRNA

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XM 089866 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC143506), mRNA XM 090203 Homo sapiens similar to Olfactory receptor 2AG1 (HT3) (LOC144125), mRN/ XM 090294 Homo sapiens hypothetical protein FLJ38508 (FLJ38508), mRNA XM 090844 Homo sapiens hypothetical protein LOC161291 (LOC161291), mRNA XM 090885 Homo sapiens chromosome 14 open reading frame 42 (C14orf42), mRNA XM 091156 Homo sapiens similar to Adenosine deaminase CG11994-PA (LOC161823), XM 091331 Homo sapiens hypothetical protein LOC162073 (LOC162073), mRNA XM 091809 Homo sapiens similar to WW domain binding protein 2 (LOC147468), mRNA XM 091830 Homo sapiens similar to G protein-coupled receptor 124 (LOC162835), mRN XM 091886 Homo sapiens similar to Zinc finger protein Kr18 (HKr18) (LOC162962), mR1 XM\_091914 Homo sapiens hypothetical protein LOC162993 (LOC162993). mRNA XM\_092019 Homo sapiens similar to BC331191\_1 (LOC163131), mRNA XM\_092241 Homo sapiens similar to Olfactory receptor 6B3 (LOC150681), mRNA XM\_092267 Homo sapiens similar to keratin 8; cytokeratin 8; keratin, type II cytoskeletal { XM\_092342 Homo sapiens hypothetical protein FLJ39061 (FLJ39061), mRNA XM\_092553 Homo saplens similar to autoantigen NOR-90 (LOC151320), mRNA XM 092681 Homo sapiens similar to MLRQ subunit of the NADH ubiquinone exidereduct XM 092778 Homo sapiens hypothetical protein LOC164395 (LOC164395), mRNA XM 092995 Homo sapiens zinc finger protein 21 (KOX 14) (ZNF21), mRNA XM 093024 Homo saplens hypothetical protein LOC169981 (LOC169981), mRNA XM 093087 Homo saplens similar to transcription factor (p38 Interacting protein) (LOC17 XM 093644 Homo sapiens similar to NACHT-, LRR- and PYD-containing protein 2 (PYRI XM\_093813 Homo sapiens similar to hypothetical protein (LOC166348), mRNA XM\_093839 Homo sapiens KIAA0826 protein (KIAA0826). mRNA XM\_093895 Homo sapiens KIAA0882 protein (KIAA0882), mRNA XM 094066 Homo saplens similar to RIKEN cDNA 5430419M09 (LOC152877), mRNA XM 094074 Homo sapiens similar to embryonic blastocoelar extracellular matrix protein r XM 094581 Homo sapiens SEC24 related gene family, member A (S. cerevisiae) (SEC24 XM 094794 Homo sapiens dapper homolog 2, antagonist of beta-catenin (xenopus) (DAC XM 095568 Homo sapiens hypothetical protein DKFZp762C1112 (DKFZp762C1112), mF XM 095746 Homo sapiens forkhead box D4 (FOXD4), mRNA XM 095965 Homo sapiens hypothetical protein LOC169834 (LOC169834), mRNA XM 095991 Homo saplens chromosome 9 open reading frame 81 (C9orf81), mRNA XM\_096317 Homo sapiens chromosome 10 open reading frame 73 (C10orf73), mRNA XM 096376 Homo sapiens hypothetical LOC143034 (LOC143034), mRNA XM\_096472 Homo sapiens similar to RIKEN cDNA 1700021K07 (LOC143678), mRNA XM\_096516 Homo saplens hypothetical LOC143970 (LOC143970), mRNA XM\_096642 Homo sapiens hypothetical LOC144631 (LOC144631), mRNA XM\_096676 Homo sapiens hypothetical LOC144762 (LOC144762), mRNA XM 096688 Homo sapiens hypothetical protein LOC144920 (LOC144920), mRNA XM 096733 Homo sapiens chromosome 14 open reading frame 72 (C14orf72), mRNA XM 096734 Homo sapiens hypothetical LOC145197 (LOC145197), mRNA XM\_096852 Homo sapiens hypothetical LOC145741 (LOC145741), mRNA XM\_096864 Homo sapiens hypothetical LOC145780 (LOC145780), mRNA XM\_096883 Homo sapiens hypothetical LOC145846 (LOC145846), mRNA XM\_096885 Homo sapiens similar to ENSANGP00000021391 (LOC145853), mRNA XM\_096919 Homo sapiens similar to SH2 domain protein 2A (T cell-specific adapter protein XM\_097065 Homo sapiens hypothetical LOC146701 (LOC146701), mRNA XM\_097265 Homo sapiens hypothetical protein LOC147670 (LOC147670), mRNA XM\_097278 Homo sapiens hypothetical LOC147710 (LOC147710), mRNA

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XM\_097351 Homo sapiens hypothetical LOC147975 (LOC147975), mRNA
XM\_097580 Homo sapiens hypothetical protein LOC149088 (LOC149088), mRNA
XM\_097622 Homo sapiens similar to RIKEN c0NA C030014422 gene (LOC149297), mR
XM\_097725 Homo sapiens hypothetical LOC149738 (LOC149738), mRNA

XM 097347 Homo sapiens hypothetical LOC147941 (LOC147941), mRNA

XM\_097729 Homo sapiens hypothetical LOC149704 (LOC149704), mRNA
XM\_097736 Homo sapiens chromosome 20 open reading frame 82 (C20orf82), mRNA

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XM 097753 Homo sapiens hypothetical LOC149913 (LOC149913), mRNA XM 097792 Homo sapiens hypothetical LOC150051 (LOC150051), mRNA XM 097886 Homo sapiens hypothetical protein LOC150223 (LOC150223), mRNA XM 097977 Homo sapiens hypothetical protein LOC150946 (LOC150946), mRNA XM 098008 Homo sapiens hypothetical LOC151154 (LOC151154), mRNA XM 098030 Homo sapiens hypothetical LOC151261 (LOC151261), mRNA XM 098117 Homo sapiens hypothetical LOC151760 (LOC151760), mRNA XM 098163 Homo sapiens hypothetical LOC152118 (LOC152118), mRNA XM\_098164 Homo sapiens hypothetical LOC152122 (LOC152122), mRNA XM 098238 Homo sapiens SH3 domain protein D19 (DKFZp434D0215), mRNA XM\_098317 Homo sapiens hypothetical LOC153134 (LOC153134), mRNA XM\_098350 Homo sapiens hypothetical LOC153297 (LOC153297), mRNA XM 098368 Homo sapiens KIAA1317 protein (KIAA1317), mRNA XM 098406 Homo sapiens hypothetical LOC153630 (LOC153630), mRNA XM 098450 Homo sapiens hypothetical LOC153959 (LOC153959), mRNA XM 098512 Homo saplens hypothetical LOC154323 (LOC154323), mRNA XM 098625 Homo sapiens hypothetical LOC154872 (LOC154872), mRNA XM 098762 Homo sapiens KIAA1416 protein (KIAA1416), mRNA XM 098828 Homo sapiens hypothetical LOC157813 (LOC157813), mRNA XM 098847 Homo saplens hypothetical LOC157943 (LOC157943), mRNA XM 098940 Homo sapiens similar to zinc finger protein 11b (KOX 2) (LOC158431), mRN XM 098980 Homo saniens hypothetical LOC158730 (LOC158730), mRNA XM 099034 Homo saplens hypothetical LOC159170 (LOC159170), mRNA XM 104657 Homo sapiens similar to RIKEN cDNA 1700019P01 (LOC164714), mRNA XM 106386 Homo sapiens KIAA1345 protein (KIAA1345), mRNA XM\_113228 Homo sapiens similar to Proprotein convertase subtilisin/kexin type 7 precurs XM 113596 Homo sapiens similar to CG32542-PA (LOC196752), mRNA XM 113625 Homo sapiens hypothetical protein LOC195977 (LOC195977), mRNA XM 113641 Homo saplens hypothetical protein LOC196051 (LOC196051), mRNA XM\_113678 Homo sapiens nucleoporin 160kDa (NUP160), mRNA XM\_113696 Homo sapiens hypothetical protein LOC196337 (LOC196337), mRNA XM\_113706 Homo sapiens dynein, axonemal, heavy polypeptide 10 (DNAH10), mRNA XM\_113708 Homo sapiens hypothetical protein LOC196394 (LOC196394), mRNA XM 113743 Homo sapiens hypothetical protein DKFZp313M0720 (DKFZp313M0720), ml XM\_113763 Homo sapiens chromosome 14 open reading frame 125 (C14orf125), mRNA XM\_113776 Homo sapiens hypothetical protein LOC196913 (LOC196913), mRNA XM 113796 Homo sapiens hypothetical protein LOC196996 (LOC196996), mRNA XM 113825 Homo sapiens similar to RIKEN cDNA 4930424G05 (LOC197135), mRNA XM 113871 Homo sapiens hypothetical protein LOC197350 (LOC197350), mRNA XM\_113912 Homo sapiens similar to DKFZP566O084 protein (LOC201140), mRNA XM 113916 Homo sapiens similar to hypothetical protein A930006D11 (LOC201181), mF XM\_113947 Homo sapiens KIAA0565 gene product (KIAA0565), mRNA XM\_113967 Homo sapiens similar to Rab12 protein (LOC201475), mRNA XM\_113971 Homo sapiens similar to B230208J24Rik protein (LOC201501), mRNA XM\_113978 Homo sapiens hypothetical protein LOC284352 (LOC284352), mRNA XM\_114000 Homo sapiens ankyrin repeat domain 24 (ANKRD24), mRNA XM\_114047 Homo sapiens similar to KIAA0454 protein (LOC199882), mRNA XM 114067 Homo sapiens similar to expressed sequence AV028368 (LOC199953), mRt XM 114087 Homo sapiens KIAA1836 protein (KIAA1836), mRNA XM\_114090 Homo sapiens similar to KIAA0454 protein (LOC200019), mRNA XM\_114129 Homo sapiens hypothetical LOC200159 (LOC200159), mRNA XM\_114152 Homo sapiens hypothetical protein LOC200205 (LOC200205), mRNA XM\_114156 Homo sapiens hypothetical protein LOC200213 (LOC200213), mRNA

XM\_114158 Homo sapiens similar to Polyadenylate-binding protein 2 (Poly(A)-binding protein XM\_114168 Homo sapiens similar to KIAA0386 (LOC200230), mRNA XM\_114222 Homo sapiens similar to hypothetical protein (LOC200373), mRNA XM\_114272 Homo sapiens selective LIM binding factor, rat homolog (SLB), mRNA

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XM 114297 Homo sapiens hypothetical protein FLJ10599 (FLJ10599), mRNA XM 114301 Homo sapiens similar to beta-1,4-mannosyltransferase; beta-1,4 mannosyltra XM\_114303 Homo sapiens GRP1-binding protein GRSP1 (GRSP1), mRNA XM\_114317 Homo sapiens similar to RIKEN cDNA 3110001N18 (LOC200916), mRNA XM\_114355 Homo sapiens similar to esterase/N-deacetylase (EC 3.5.1.-), 50K hepatic - I XM\_114415 Homo sapiens similar to Glycerol kinase, testis specific 1 (ATP:glycerol 3-phr XM\_114418 Homo sapiens KIAA1729 protein (KIAA1729), mRNA XM\_114430 Homo sapiens hypothetical protein LOC202051 (LOC202051), mRNA XM\_114432 Homo sapiens KIAA1281 protein (KIAA1281), mRNA XM 114447 Homo sapiens KIAA1999 protein (KIAA1999), mRNA XM\_114456 Homo sapiens hypothetical protein LOC202181 (LOC202181), mRNA XM 114481 Homo sapiens hypothetical LOC202404 (LOC202404), mRNA XM 114560 Homo sapiens similar to hypothetical protein MGC35361 (LOC202802), mRN XM\_114611 Homo sapiens hypothetical protein KIAA1833 (KIAA1833), mRNA XM\_114618 Homo sapiens hypothetical protein LOC203069 (LOC203069), mRNA XM\_114621 Homo sapiens similar to RIKEN cDNA 4930578106 (LOC203076), mRNA XM\_114685 Homo sapiens chromosome 9 open reading frame 21 (C9orf21), mRNA XM\_114723 Homo sapiens similar to PAGE-5 protein (LOC203569), mRNA XM\_114735 Homo sapiens complement component (3b/4b) receptor 1-like (CR1L), mRN XM\_114973 Homo sapiens hypothetical protein LOC203806 (LOC203806), mRNA XM\_114987 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC196120), mRNA XM 115009 Homo sapiens hypothetical protein LOC203859 (LOC203859), mRNA XM\_115092 Homo sapiens similar to Olfactory receptor 56B4 (LOC196335), mRNA XM 115100 Homo sapiens similar to autoantigen NOR-90 (LOC196346), mRNA XM\_115715 Homo sapiens similar to ENSANGP0000000189 (LOC200493), mRNA XM\_115760 Homo sapiens similar to h2-calponin (LOC205272), mRNA XM\_115769 Homo saplens similar to chromosome 20 open reading frame 81 (LOC20059 XM\_115897 Homo sapiens similar to high mobility group protein homolog HMG4 (LOC20: XM\_115925 Homo sapiens similar to trophinin; melanoma antigen, family D, 3; trophinin-2 XM\_115974 Homo sapiens similar to hypothetical protein H41 (LOC200842), mRNA XM\_116036 Homo sapiens similar to Gamma-aminobutyric-acid receptor rho-3 subunit pr XM\_116384 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_116396 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC2022 XM 116497 Homo sapiens chromosome 6 open reading frame 163 (C6orf163), mRNA XM 116623 Homo saplens similar to Ubiquinol-cytochrome C reductase iron-sulfur subur XM\_116936 Homo sapiens similar to RIKEN cDNA 2310038H17 (LOC196541), mRNA XM\_116970 Homo sapiens similar to hypothetical protein (LOC196994), mRNA XM\_116971 Homo sapiens hypothetical protein LOC196993 (LOC196993), mRNA XM\_116980 Homo sapiens hypothetical LOC197049 (LOC197049), mRNA XM\_117014 Homo sapiens hypothetical LOC197317 (LOC197317), mRNA XM\_117030 Homo sapiens hypothetical LOC197387 (LOC197387), mRNA XM\_117044 Homo sapiens hypothetical LOC201109 (LOC201109), mRNA XM\_117056 Homo sapiens hypothetical LOC201201 (LOC201201), mRNA XM\_117100 Homo sapiens hypothetical LOC201484 (LOC201484), mRNA XM 117112 Homo sapiens hypothetical LOC199680 (LOC199680), mRNA XM\_117117 Homo sapiens hypothetical gene FLJ13072 (FLJ13072), mRNA XM\_117152 Homo sapiens hypothetical LOC199897 (LOC199897), mRNA XM\_117174 Homo sapiens hypothetical protein LOC200010 (LOC200010), mRNA XM\_117213 Homo sapiens hypothetical LOC200292 (LOC200292), mRNA XM\_117224 Homo sapiens similar to RIKEN cDNA 0610009J22 (LOC200312), mRNA XM\_117236 Homo sapiens hypothetical LOC200475 (LOC200475), mRNA XM\_117239 Homo sapiens hypothetical LOC200491 (LOC200491), mRNA XM\_117257 Homo saplens hypothetical LOC200624 (LOC200624), mRNA XM\_117266 Homo sapiens hypothetical LOC200726 (LOC200726), mRNA XM\_117268 Homo sapiens hypothetical LOC200731 (LOC200731), mRNA XM\_117294 Homo sapiens hypothetical protein LOC200933 (LOC200933), mRNA XM\_117408 Homo sapiens hypothetical LOC202546 (LOC202546), mRNA

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XM 117451 Homo sapiens hypothetical LOC202775 (LOC202775), mRNA XM 117514 Homo sapiens hypothetical LOC203235 (LOC203235), mRNA XM 117548 Homo sapiens hypothetical LOC203413 (LOC203413), mRNA XM 165401 Homo sapiens similar to heat shock 70kD protein binding protein; progestero XM 165448 Homo sapiens similar to BLOCK 23 (LOC220717), mRNA XM\_165511 Homo sapiens similar to Fatty acid-binding protein, epidermal (E-FABP) (Psc XM 165534 Homo sapiens similar to methyltransferase-like protein 1 isoform c; D1075-lik XM 165921 Homo sapiens similar to HP95 (LOC219392), mRNA XM\_165973 Homo sapiens ubiquitin specific protease 24 (USP24), mRNA XM 166086 Homo sapiens neuregulin 3 (NRG3), mRNA XM\_166090 Homo sapiens placenta-specific 9 (PLAC9), mRNA XM 166103 Homo sapiens DNA2 DNA replication helicase 2-like (yeast) (DNA2L), mRNA XM 166110 Homo sapiens G protein-coupled receptor 158 (GPR158), mRNA XM 166125 Homo saplens KIAA protein (similar to mouse paladin) (KIAA1274), mRNA XM 166132 Homo sapiens KIAA1462 (KIAA1462), mRNA XM 166138 Homo sapiens ankyrin repeat domain 16 (ANKRD16), mRNA XM 166140 Homo sapiens Scm-like with four mbt domains 2 (SFMBT2), mRNA XM 166160 Homo sapiens similar to chromosome 6 open reading frame 182 (LOC22101 XM 166164 Homo sapiens hypothetical protein LOC219854 (LOC219854), mRNA XM 166203 Homo saplens similar to RIKEN cDNA 1110030K22 (LOC219537), mRNA XM\_166213 Homo sapiens KIAA0937 protein (KIAA0937), mRNA XM\_166227 Homo saplens macrophage expressed gene 1 (MPEG1), mRNA XM 166254 Homo sapiens odd Oz/ten-m homolog 4 (ODZ4), mRNA XM 166256 Homo saplens microtubule-associated protein 6 (MAP6), mRNA XM\_166270 Homo sapiens KIAA0774 (KIAA0774), mRNA XM\_166300 Homo sapiens absent in melanoma 1 (AIM1), mRNA XM\_166320 Homo sapiens KIAA1553 (KIAA1553), mRNA XM 166346 Homo sapiens chromosome 6 open reading frame 129 (C6orf129), mRNA XM 166372 Homo saplens leucine rich repeat and fibronectin type III domain containing : XM 166376 Homo sapiens KIAA1949 protein (KIAA1949), mRNA XM 166420 Homo sapiens RPEL repeat containing 1 (RPEL1), mRNA XM 166432 Homo sapiens hypothetical protein LOC221442 (LOC221442), mRNA XM\_166443 Homo saplens tudor domain containing 6 (TDRD6), mRNA XM\_166450 Homo sapiens bromodomain and PHD finger containing, 3 (BRPF3), mRNA XM 166451 Homo sapiens KIAA1586 (KIAA1586), mRNA XM 166453 Homo sapiens tau tubulin kinase 1 (TTBK1), mRNA XM 166479 Homo sapiens KIAA0240 (KIAA0240), mRNA XM\_166508 Homo saplens TWIST neighbor (TWISTNB), mRNA XM\_166523 Homo sapiens tweety homolog 3 (Drosophila) (TTYH3), mRNA XM\_166527 Homo sapiens KIAA0415 gene product (KIAA0415), mRNA XM 166529 Homo sapiens glucocorticoid induced transcript 1 (GLCCI1), mRNA XM\_166532 Homo sapiens KIAA1950 protein (KIAA1950), mRNA XM\_166571 Homo sapiens KIAA0363 protein (KIAA0363), mRNA XM\_166573 Homo sapiens KIAA0895 protein (KIAA0895), mRNA XM\_166630 Homo saplens similar to KIAA2020 protein (LOC387692), mRNA XM 166659 Homo sapiens hypothetical protein LOC220213 (LOC220213), mRNA XM\_166707 Homo sapiens olfactory receptor, family 13, subfamily A, member 1 (OR13A' XM 166720 Homo saplens similar to Protein C21orf59 (LOC220998), mRNA XM\_166747 Homo sapiens similar to KIAA1838 (LOC219797), mRNA XM 166757 Homo sapiens similar to Olfactory receptor 8B12 (LOC219858), mRNA XM 166767 Homo sapiens similar to seven transmembrane helix receptor (LOC219865), XM 166776 Homo sapiens similar to Olfactory receptor 10G8 (LOC219869), mRNA XM 166777 Homo sapiens similar to Olfactory receptor 10G9 (LOC219870), mRNA XM\_166780 Homo sapiens similar to Olfactory receptor 10S1 (LOC219873), mRNA XM 166781 Homo sapiens similar to Olfactory receptor 6T1 (LOC219874), mRNA

XM\_166782 Homo sapiens similar to Olfactory receptor 4D5 (LOC219875), mRNA
XM\_166805 Homo sapiens similar to seven transmembrane helix receptor (LOC219417).

XM\_166808 Homo sapiens similar to Olfactory receptor 5AS1 (LOC219447), mRNA XM\_166813 Homo sapiens similar to Olfactory receptor 8K5 (LOC219453), mRNA XM\_166818 Homo sapiens similar to hypothetical protein FLJ13194 (LOC219462), mRN/ XM\_166820 Homo sapiens similar to Olfactory receptor 5T2 (LOC219464), mRNA XM\_166823 Homo sapiens similar to Olfactory receptor 8H1 (LOC219469), mRNA XM\_166825 Homo sapiens similar to Olfactory receptor 8K3 (LOC219473), mRNA XM\_166829 Homo sapiens similar to Olfactory receptor 8J1 (LOC219477), mRNA XM\_166831 Homo sapiens similar to seven transmembrane helix receptor (LOC219479), XM\_166834 Homo sapiens similar to Olfactory receptor 5M3 (LOC219482), mRNA XM\_166835 Homo sapiens similar to Olfactory receptor 5M8 (LOC219484), mRNA XM\_166845 Homo sapiens similar to Olfactory receptor 5AR1 (LOC219493), mRNA XM\_166856 Homo sapiens similar to expressed sequence Al841794 (LOC219527), mRN XM\_166868 Homo sapiens similar to Olfactory receptor 4C16 (LOC219428), mRNA XM\_166869 Homo sapiens similar to seven transmembrane helix receptor (LOC219429). XM 166871 Homo sapiens similar to Olfactory receptor 4S2 (LOC219431), mRNA XM\_166872 Homo sapiens similar to Olfactory receptor 4C6 (LOC219432), mRNA XM\_166877 Homo sapiens similar to Olfactory receptor 5D14 (LOC219436), mRNA XM\_166878 Homo sapiens similar to Olfactory receptor 5L1 (OST262) (LOC219437), mR XM\_166879 Homo sapiens similar to Olfactory receptor 5D18 (LOC219438), mRNA XM\_166898 Homo saplens similar to Olfactory receptor 5A2 (LOC219981), mRNA XM\_166899 Homo sapiens similar to Olfactory receptor 5A1 (OST181) (LOC219982), mR XM\_166900 Homo sapiens similar to Olfactory receptor 4D6 (LOC219983), mRNA XM\_166903 Homo sapiens similar to seven transmembrane helix receptor (LOC219986). XM\_166910 Homo sapiens similar to Olfactory receptor 6Q1 (LOC219952), mRNA XM\_166912 Homo sapiens similar to Olfactory receptor 9I1 (LOC219954), mRNA XM\_166914 Homo sapiens similar to Olfactory receptor 9Q1 (LOC219956), mRNA XM 166915 Homo sapiens similar to seven transmembrane helix receptor (LOC219957), XM\_166916 Homo sapiens similar to Olfactory receptor 1S2 (LOC219958), mRNA XM\_166917 Homo saplens similar to Olfactory receptor 1S1 (LOC219959), mRNA XM\_166918 Homo sapiens similar to Olfactory receptor 10Q1 (LOC219960), mRNA XM\_166923 Homo sapiens similar to Olfactory receptor 5B17 (LOC219965), mRNA XM\_166926 Homo saplens similar to olfactory receptor MOR202-4 (LOC219968), mRNA XM\_166966 Homo sapiens similar to Meningioma-expressed antigen 6/11 (MEA6) (MEA1 XM\_166971 Homo sapiens similar to Leucine-rich repeat protein SHOC-2 (Ras-binding pr XM\_167001 Homo sapiens similar to 40S ribosomal protein S26 (LOC219542), mRNA XM\_167044 Homo sapiens solute carrier family 35, member F1 (SLC35F1), mRNA XM\_167072 Homo sapiens benzodlazapine receptor (peripheral)-like 1 (BZRPL1), mRNA XM\_167147 Homo sapiens zinc finger protein 390 (ZNF390), mRNA XM\_167149 Homo saplens chromosome 6 open reading frame 194 (C6orf194), mRNA XM\_167152 Homo sapiens similar to Zinc finger protein 192 (LD5-1) (LOC222701), mRN, XM\_167254 Homo sapiens similar to tropomyosin 3 (LOC221875), mRNA XM\_167275 Homo sapiens similar to ribosomal protein L23 (LOC222901), mRNA XM\_167709 Homo sapiens hypothetical protein LOC221061 (LOC221061), mRNA XM\_167711 Homo sapiens integrin, alpha 8 (ITGA8), mRNA XM\_167908 Homo sapiens hypothetical LOC221140 (LOC221140), mRNA XM\_168030 Homo saplens zinc finger protein 319 (ZNF319), mRNA XM 168053 Homo sapiens chromosome 6 open reading frame 184 (C6orf184), mRNA XM\_168055 Homo sapiens chromosome 6 open reading frame 185 (C6orf185), mRNA XM\_168060 Homo sapiens chromosome 6 open reading frame 154 (C6orf154), mRNA XM 168073 Homo sapiens hypothetical LOC221344 (LOC221344), mRNA XM 168101 Homo sapiens hypothetical LOC221766 (LOC221766), mRNA Homo sapiens similar to RIKEN cDNA A530016006 gene (LOC221813), mR XM 168223 XM 168302 Homo sapiens zinc finger protein 36 (KOX 18) (ZNF36), mRNA XM\_168354 Homo sapiens similar to SMT3 suppressor of mif two 3 homolog 2 (LOC2220 XM 168521 Homo sapiens hypothetical LOC222190 (LOC222190), mRNA XM\_168578 Homo sapiens mucin 3B (MUC3B), mRNA

XM 168583 Homo sapiens mucin 17 (MUC17), mRNA

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XM 168585 Homo sapiens similar to mucin 11 (LOC219612), mRNA XM 168590 Homo sapiens zuotin related factor 1 (ZRF1), mRNA XM 169057 Homo saplens hypothetical LOC219908 (LOC219908), mRNA XM 169227 Homo sapiens similar to proline rich antigen 2 (LOC220061), mRNA XM 169258 Homo sapiens similar to KIAA0543 protein (LOC219638), mRNA XM\_169434 Homo sapiens similar to TAR DNA binding protein (LOC219414), mRNA XM 170525 Homo sapiens similar to ARF GTPase-activating protein (LOC255319), mRN XM\_170536 Homo sapiens similar to eukaryotic translation initiation factor 2, subunit 3 ga XM\_170597 Homo sapiens similar to peptidylprolyl isomerase A (LOC256374), mRNA XM 170620 Homo sapiens similar to 60S ribosomal protein L21 (LOC256457), mRNA XM\_170637 Homo sapiens similar to beta-tubulin 4Q (LOC253936), mRNA XM\_170658 Homo sapiens tangenn (DKFZp762C186), mRNA XM 170659 Homo saniens similar to 2010003K11Rik protein (LOC254439), mRNA XM 170667 Homo sapiens hypothetical protein LOC254359 (LOC254359), mRNA XM 170708 Homo sapiens hypothetical LOC255411 (LOC255411), mRNA XM 170736 Homo sapiens hypothetical protein LOC253512 (LOC253512), mRNA XM 170749 Homo sapiens similar to GARNL1 protein (LOC387984), mRNA XM 170754 Homo sapiens similar to serine (or cysteine) proteinase inhibitor, clade A (alr. XM 170777 Homo sapiens similar to Microsomal signal peptidase 25 kDa subunit (SPase XM 170840 Homo sapiens similar to CDRT15 protein (LOC256223), mRNA XM\_170842 Homo sapiens hypothetical protein FLJ40244 (FLJ40244), mRNA XM 170909 Homo sapiens similar to hypothetical protein MGC20470 (LOC257177), mRN XM 170950 Homo sapiens similar to OSJNBa0043A12.32 (LOC254897), mRNA XM 170994 Homo sapiens hypothetical LOC255349 (LOC255349), mRNA XM 171008 Home sapiens similar to high mobility group AT-hook 1 (LOC257200), mRNA XM\_171013 Homo sapiens similar to Gamma-2-syntrophin (G2SYN) (Syntrophin 5) (SYN XM 171032 Homo saplens hypothetical protein LOC255812 (LOC255812), mRNA XM 171040 Homo sapiens similar to MEGF6 (LOC253820), mRNA XM 171054 Homo sapiens KIAA0527 protein (KIAA0527), mRNA XM 171060 Homo sapiens hypothetical protein MGC50836 (MGC50836), mRNA XM 171068 Homo sapiens hypothetical protein LOC253017 (LOC253017), mRNA XM 171078 Homo saplens similar to ALGV3072 (LOC255324), mRNA XM 171081 Home saplens similar to ras-related C3 botulinum toxin substrate 1 isoform F XM\_171094 Homo sapiens similar to eukaryotic translation initiation factor eIF4E-1 (LOC; XM 171105 Homo sapiens hypothetical LOC255338 (LOC255338), mRNA XM 171150 Homo sapiens similar to bA145E8.1 (KIAA1074) (LOC254027), mRNA XM\_171154 Homo saplens similar to myelin protein zero-like 1; protein zero related (LOC XM 171156 Homo sapiens similar to bA145E8.1 (KIAA1074) (LOC254750), mRNA XM 171158 Homo sapiens similar to ribosomal protein S2; 40S ribosomal protein S2 (MG XM 171163 Homo sapiens similar to Six transmembrane epithelial antigen of prostate (LC XM 171165 Homo saplens similar to cAMP-dependent protein kinase type I-beta regulator XM\_171171 Homo saplens similar to hypothetical protein MGC49416 (LOC255374), mRN XM\_171207 Homo sapiens similar to RIKEN cDNA 4930429J24 (LOC255220), mRNA XM\_171224 Homo sapiens coactivator associated arginine methyltransferase 1-like (CAR XM 171410 Homo saplens hypothetical protein DKFZp667B0210 (DKFZp667B0210), mF XM 171424 Homo sapiens similar to olfactory receptor (LOC256892), mRNA XM 171447 Homo saplens similar to Transcription elongation factor B polypeptide 2 (RN) XM 171489 Homo sapiens similar to seven transmembrane helix receptor (LOC256144), XM\_171490 Homo sapiens similar to Olfactory receptor 4S1 (LOC256148), mRNA XM\_171495 Homo sapiens similar to Claudin-22 (LOC255244), mRNA XM\_171503 Homo sapiens similar to large subunit ribosomal protein L36a (LOC255701), XM 171528 Homo sapiens similar to seven transmembrane helix receptor (LOC255725), XM 171536 Homo sapiens mas-related G protein-coupled MRGE (MRGE), mRNA XM\_171578 Homo sapiens similar to olfactory receptor MOR109-1 (LOC254783), mRNA XM 171581 Homo saplens similar to olfactory receptor MOR111-4 (LOC254786), mRNA XM 171590 Homo sapiens similar to ribosomal protein L22 (LOC256441), mRNA

XM 171766 Homo sapiens similar to high mobility group protein homolog HMG4 (LOC25)

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XM\_171855 Homo sapiens similar to myeloid-associated differentiation marker (LOC2552 XM 171892 Homo sapiens similar to ribosomal protein L31 (LOC253013), mRNA XM\_171973 Homo sapiens similar to zinc finger protein 91 (HPF7, HTF10) (LOC253342), XM\_172230 Homo sapiens similar to ribosomal protein S17 (LOC257039), mRNA XM\_172341 Homo sapiens hypothetical protein FLJ35036 (FLJ35036), mRNA XM\_172389 Homo sapiens similar to Tryptophan-rich protein (Congenital heart disease 5 XM\_172751 Homo sapiens similar to Olfactory receptor 1L4 (Olfactory receptor 9-E) (OR! XM\_172801 Homo sapiens KIAA1210 protein (KIAA1210), mRNA XM\_172852 Homo sapiens hypothetical LOC256676 (LOC256676), mRNA XM 172855 Homo sapiens hypothetical LOC255849 (LOC255849), mRNA XM 172860 Homo sapiens hypothetical LOC255649 (LOC255649), mRNA XM 172861 Homo sapiens similar to ZP1 precursor (LOC255714), mRNA XM 172874 Homo sapiens hypothetical LOC253724 (LOC253724), mRNA XM\_172889 Homo sapiens hypothetical LOC256176 (LOC256176), mRNA XM 172917 Homo sapiens hypothetical LOC256453 (LOC256453), mRNA XM 172929 Homo sapiens hypothetical protein LOC255189 (LOC255189), mRNA XM 172931 Homo sapiens hypothetical protein LOC254559 (LOC254559), mRNA XM 172968 Homo sapiens hypothetical protein LOC253962 (LOC253962), mRNA XM\_172995 Homo sapiens hypothetical LOC255809 (LOC255809), mRNA XM 173012 Homo sapiens hypothetical LOC256686 (LOC256686), mRNA XM\_173015 Homo sapiens hypothetical LOC256483 (LOC256483), mRNA XM 173036 Homo sapiens hypothetical protein LOC255654 (LOC255654), mRNA XM\_173063 Homo sapiens hypothetical LOC253662 (LOC253662), mRNA XM 173068 Homo sapiens hypothetical LOC253584 (LOC253584), mRNA XM 173083 Homo sapiens hypothetical protein LOC255025 (LOC255025), mRNA XM 173084 Homo sapiens hypothetical protein LOC254827 (LOC254827), mRNA XM\_173087 Homo sapiens hypothetical protein LOC255798 (LOC255798), mRNA XM\_173105 Homo sapiens hypothetical LOC256283 (LOC256283), mRNA XM\_173119 Homo sapiens hypothetical LOC255130 (LOC255130), mRNA XM\_173120 Homo sapiens hypothetical LOC254938 (LOC254938), mRNA XM\_173132 Homo saplens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B; XM\_173135 Homo sapiens hypothetical LOC256880 (LOC256880), mRNA XM\_173140 Homo sapiens hypothetical LOC253254 (LOC253254), mRNA XM\_173160 Homo sapiens hypothetical LOC255187 (LOC255187), mRNA XM\_173164 Homo saplens hypothetical LOC256096 (LOC256096), mRNA XM\_173166 Homo sapiens chromosome 6 open reading frame 191 (C6orf191), mRNA XM 173173 Homo sapiens amine oxidase, flavin containing 1 (AOF1), mRNA XM\_175125 Homo sapiens hemicentin-2 (DKFZp434P0216), mRNA XM 208028 Homo sapiens similar to double homeobox protein (LOC283039), mRNA XM\_208035 Homo sapiens similar to hypothetical protein FLJ10817 (LOC347806), mRN/. XM\_208042 Homo sapiens similar to 40S ribosomal protein S25 (LOC283114), mRNA XM 208043 Homo sapiens similar to RING finger protein 18 (Testis-specific ring-finger pr XM\_208058 Homo saplens similar to NADPH oxidase 4 variant (LOC283247), mRNA XM\_208060 Homo sapiens similar to tripartite motif-containing 51 (LOC283257), mRNA XM\_208061 Homo sapiens similar to tripartite motif protein 48; TRIM48 (LOC283259), mF XM 208072 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM 208080 Homo sapiens similar to Polyhomeotic-like protein 1 (Early development requ XM 208097 Homo sapiens similar to telomeric repeat binding factor 1 isoform 2: Telomer XM\_208108 Homo sapiens similar to synaptogyrin 2; cellugyrin (LOC283698), mRNA XM\_208116 Homo sapiens similar to elongation factor SIII p15 subunit (LOC283747), mR XM\_208142 Homo sapiens similar to hypothetical protein (LOC283957), mRNA XM\_208145 Homo sapiens similar to rhophllin-like protein; RhoB effector; rhophilin-2; rho XM 208151 Homo sapiens similar to solute carrier family 16, member 6; monocarboxylate XM 208185 Homo sapiens similar to large subunit ribosomal protein L36a (LOC284230).

XM\_208200 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helbi-XM\_208203 Homo sapiens similar to methyl-CpG binding domain protein 3-like 2 LOC28 XM\_208204 Homo sapiens similar to actin-related protein 2 (LOC284441), mRNA

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XM\_208213 Homo sapiens similar to fatty acid omega-hydroxylase CYP4A11 (LOC28454 XM 208234 Homo sapiens similar to unactive progesterone receptor, 23 kD; likely ortholo XM 208250 Homo sapiens similar to FRG1 protein (FSHD region gene 1 protein) (LOC28 XM 208261 Homo sapiens similar to lymphocyte activation-associated protein; kelch (Dro XM 208270 Homo sapiens acrosin-like protease (bA395L14.13), mRNA XM 208281 Homo sapiens similar to ribosomal protein L18a; 60S ribosomal protein L18a XM\_208300 Homo sapiens similar to 60S ribosomal protein L23a (LOC285214), mRNA XM\_208312 Homo sapiens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B; XM\_208313 Homo sapiens similar to tropomyosin 4 (LOC285321), mRNA XM\_208316 Homo sapiens similar to vascular endothelial zinc finger 1 (LOC285388), mR XM\_208317 Homo sapiens similar to 40S ribosomal protein S20 (LOC285384), mRNA XM 208319 Homo sapiens similar to Epidermal Langerhans cell protein LCP1 (LOC2854 XM\_208320 Homo sapiens similar to mitochondrial translational release factor 1-like (LOC XM\_208333 Homo sapiens hypothetical protein MGC48637 (MGC48637), mRNA XM 208352 Homo sapiens alcohol dehydrogenase 5B (ADH5B), mRNA XM 208356 Homo sapiens similar to cytochrome c oxidase subunit VIa polypeptide 1 pre XM\_208361 Homo sapiens similar to RPL6 protein (LOC285900), mRNA XM\_208373 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM\_208403 Homo sapiens similar to Von Ebners gland protein precursor (VEG protein) ( XM\_208423 Homo sapiens similar to ribosomal protein S2; 40S ribosomal protein S2 (LO XM\_208431 Homo sapiens similar to ublqultin-conjugating enzyme UbcM2 (LOC286480), XM\_208438 Homo sapiens similar to Tetratricopeptide repeat protein 3 (TPR repeat protein XM\_208443 Homo sapiens Ras-like GTPase-like (LOC286526), mRNA XM\_208502 Homo sapiens similar to hypothetical protein 9330140G23 (LOC283071), mF XM 208522 Homo sapiens KIAA1394 protein (KIAA1394), mRNA XM 208524 Homo saplens hypothetical protein LOC283129 (LOC283129), mRNA XM 208529 Homo sapiens hypothetical protein DKFZp547C195 (DKFZp547C195), mRN XM\_208541 Homo sapiens similar to Olfactory receptor 8D2 (Olfactory receptor-like prote XM\_208543 Homo sapiens similar to Olfactory receptor 8D1 (Olfactory receptor-like prote XM\_208545 Homo sapiens similar to bone morphogenetic protein receptor, type IA precu XM\_208554 Homo saplens similar to Protein farnesyltransferase/geranylgeranyltransferas XM\_208563 Homo sapiens hypothetical LOC283202 (LOC283202), mRNA XM 208604 Homo sapiens similar to Olfactory receptor 10A4 (HP2) (Olfactory receptor-III XM\_208612 Homo sapiens hypothetical LOC283321 (LOC283321), mRNA XM 208613 Homo saplens similar to 60 kDa heat shock protein, mitochondrial precursor XM\_208635 Homo sapiens similar to cDNA sequence BC030307 (LOC283350), mRNA XM\_208647 Homo sapiens hypothetical protein LOC283377 (LOC283377), mRNA XM\_208658 Homo sapiens similar to Succlnyl-CoA ligase [GDP-forming] beta-chain, mito XM\_208667 Homo sapiens similar to HEEE9341 (LOC283420), mRNA XM\_208690 Homo sapiens similar to 40S ribosomal protein S26 (LOC283479), mRNA XM\_208731 Homo sapiens chromosome 14 open reading frame 68 (C14orf68), mRNA XM\_208746 Homo sapiens hypothetical protein LOC283578 (LOC283578), mRNA XM 208766 Homo sapiens KIAA0284 (KIAA0284), mRNA XM\_208778 Homo sapiens hypothetical LOC283677 (LOC283677), mRNA XM\_208798 Homo sapiens similar to hypothetical protein FLJ35785 (LOC283717), mRN/ XM\_208809 Homo sapiens similar to hypothetical protein D030069K18 (LOC283726), mF XM\_208835 Homo sapiens similar to hypothetical protein FLJ36144 (LOC283767), mRN/ XM 208847 Homo sapiens similar to testicular Metalloprotease-like, Disintegrin-like, Cyst XM 208859 Homo sapiens similar to ARHGAP21 protein (LOC283816), mRNA XM\_208863 Homo sapiens similar to nuclear pore complex interacting protein (LOC3481) XM\_208887 Homo sapiens hypothetical protein LOC283871 (LOC283871), mRNA XM\_208889 Homo sapiens similar to MGC9515 protein (LOC388240), mRNA XM\_208891 Homo sapiens similar to nuclear pore complex interacting protein (LOC2838) XM\_208908 Homo sapiens hypothetical protein LOC283922 (LOC283922), mRNA XM\_208927 Homo sapiens hypothetical protein FLJ36208 (FLJ36208), mRNA XM 208930 Homo sapiens similar to RIKEN cDNA 4930511J11 (LOC283953), mRNA

XM\_208944 Homo sapiens hypothetical protein LOC283989 (LOC283989), mRNA

XM 208990 Homo sapiens hypothetical LOC284067 (LOC284067), mRNA XM\_208993 Homo sapiens Similar to hypothetical gene supported by AL050367; AK0229 XM\_209012 Homo sapiens similar to keratin 17 (LOC284089), mRNA XM 209041 Homo sapiens similar to KIAA1503 protein (LOC284158), mRNA XM 209073 Homo sapiens hypothetical protein LOC284207 (LOC284207), mRNA XM 209076 Homo sapiens similar to Ankyrin repeat domain protein 18A (LOC284232), rr XM\_209083 Homo sapiens similar to telomeric repeat binding factor 1 isoform 2; Telomer XM\_209097 Homo sapiens similar to FLJ10101 protein (LOC284269), mRNA XM\_209104 Homo sapiens similar to Placental thrombin inhibitor (Cytoplasmic antiprotein XM 209111 Homo sapiens hypothetical protein LOC284307 (LOC284307), mRNA XM 209138 Homo sapiens similar to LL5 beta (LOC388548), mRNA XM\_209140 Homo sapiens hypothetical protein LOC284323 (LOC284323), mRNA XM\_209145 Homo sapiens similar to RIKEN cDNA 0610012D14 (LOC284363), mRNA XM\_209149 Homo sapiens similar to hypothetical protein FLJ31030 (LOC284318), mRN/ XM\_209155 Homo sapiens hypothetical protein LOC284371 (LOC284371), mRNA XM 209163 Homo sapiens similar to solute carrier family 7, member 3; amino acid transp XM\_209178 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM 209180 Homo saplens similar to FKSG60 (LOC284397), mRNA XM 209187 Homo sapiens similar to BC022651 protein (LOC284417), mRNA XM 209196 Homo sapiens similar to HSPC323 (LOC284422), mRNA XM 209204 Homo sapiens hypothetical protein MGC26694 (MGC26694), mRNA XM 209227 Homo sapiens similar to KIAA0456 protein (LOC391087), mRNA XM 209234 Homo sapiens hypothetical protein DKFZp434E1410 (DKFZp434E1410), mF XM\_209252 Homo sapiens similar to RIKEN cDNA 4930522H14 (LOC284546), mRNA XM\_209337 Homo sapiens similar to coiled-coil-helix-coiled-coil-helix domain containing 2 XM\_209363 Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1-li XM\_209384 Homo saplens hypothetical LOC284859 (LOC284859), mRNA XM\_209394 Homo sapiens hypothetical LOC284874 (LOC284874), mRNA XM\_209408 Homo sapiens similar to bA436C9.2 (PUTATIVE novel protein similar to part XM\_209423 Homo sapiens similar to bA395L14.5 (novel phosphoglucomutase like protein XM 209429 Homo sapiens similar to ARHQ protein (LOC284988), mRNA XM 209489 Homo sapiens similar to CG14853-PB (LOC285141), mRNA XM 209490 Homo sapiens hypothetical protein LOC285148 (LOC285148), mRNA XM 209500 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM\_209505 Homo sapiens similar to KIAA0445 protein (LOC285188), mRNA XM\_209509 Homo sapiens similar to RIKEN cDNA 0710001B24 (LOC285193), mRNA XM\_209550 Homo sapiens similar to Carboxypeptidase N 83 kDa chain (Carboxypeptidas XM 209554 Homo sapiens similar to FSHD Region Gene 2 protein (LOC285299), mRNA XM 209559 Homo sapiens similar to MGC27169 protein (LOC285303), mRNA XM\_209563 Homo saplens hypothetical LOC285311 (LOC285311), mRNA XM\_209569 Homo sapiens similar to ataxin-1 ubiquitin-like interacting protein (LOC28532 XM\_209579 Homo sapiens hypothetical protein LOC285346 (LOC285346), mRNA XM 209597 Homo sapiens similar to beta-1.4-mannosyltransferase; beta-1.4 mannosyltra XM 209604 Homo saplens hypothetical LOC285423 (LOC285423), mRNA XM 209607 Homo sapiens hypothetical protein LOC285429 (LOC285429), mRNA XM\_209612 Homo sapiens hypothetical protein LOC285440 (LOC285440), mRNA XM\_209616 Homo sapiens similar to APACD protein (LOC285453), mRNA XM\_209640 Homo sapiens hypothetical protein LOC285501 (LOC285501), mRNA XM\_209643 Homo sapiens similar to hypothetical protein FLJ20035 (LOC285510), mRN/ XM\_209655 Homo sapiens similar to beta-1,4-mannosyttransferase; beta-1,4 mannosyttra XM 209656 Homo sapiens hypothetical protein LOC285550 (LOC285550), mRNA XM 209668 Homo sapiens similar to RIKEN cDNA 1700007106 (LOC285588), mRNA XM 209695 Homo sagiens similar to Chromosome-associated kinesin KIF4A (Chromokin XM 209700 Homo sapiens similar to FLJ00052 protein (LOC285647), mRNA XM 209704 Homo sapiens similar to hypothetical protein (LOC285658), mRNA XM\_209719 Homo sapiens hypothetical protein LOC285679 (LOC285679), mRNA XM 209728 Homo sapiens similar to C-terminal binding protein 2 isoform 2; ribeye (LOC2

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XM\_209741 Homo sapiens similar to Translationally controlled tumor protein (TCTP) (p23 XM\_209753 Homo sapiens similar to FLJ00254 protein (LOC285770), mRNA XM\_209824 Homo sapiens similar to matrilin 2 precursor (LOC285929), mRNA XM\_209827 Homo sapiens similar to 40S ribosomal protein S26 (LOC285938), mRNA XM\_209870 Homo saplens similar to FLJ10408 protein (LOC286040), mRNA XM\_209889 Homo sapiens similar to hypothetical protein (LOC286076), mRNA XM\_209893 Homo sapiens similar to TBP-associated factor 15 isoform 1; TAF15 RNA po XM\_209902 Homo sapiens zinc finger protein 252 (ZNF252), mRNA XM\_209910 Homo sapiens similar to chromosome 15 open reading frame 2 (LOC286129 XM\_209913 Homo sapiens similar to ring finger protein 5 (LOC286140), mRNA XM\_209918 Homo sapiens similar to RIKEN cDNA 4930533G20 (LOC286151), mRNA XM\_209920 Homo saplens similar to mCBP (LOC286157), mRNA XM\_209936 Homo sapiens similar to RIKEN cDNA 1700011J18 (LOC286187), mRNA XM\_209941 Homo sapiens hypothetical protein LOC286207 (LOC286207), mRNA XM\_209955 Homo sapiens similar to beta-tubulin 4Q (LOC286222), mRNA XM\_209967 Homo sapiens similar to NAD-dependent malic enzyme, mitochondrial precu XM\_210022 Homo sapiens GTPase activating RANGAP domain-like 1 (GARNL1), mRNA XM 210035 Homo sapiens similar to putative UST1-like organic anion transporter (LOC2) XM\_210042 Homo sapiens similar to mitochondrial ribosome recycling factor isoform 1 (L XM\_210048 Homo sapiens hypothetical protein LOC286436 (LOC286436), mRNA XM\_210054 Homo sapiens similar to dJ341D10.1 (novel protein) (LOC286453), mRNA XM 210062 Homo sapiens ras-related C3 botulinum toxin substrate family member 4 (RA XM 210082 Homo sapiens similar to 40S ribosomal protein S26 (LOC286513), mRNA XM 210094 Homo sapiens similar to 40S ribosomal protein S26 (LOC286539), mRNA XM\_210119 Homo sapiens similar to Olfactory receptor 5AT1 (LOC284532), mRNA XM\_210168 Homo sapiens similar to Olfactory receptor 4C13 (LOC283092), mRNA XM\_210169 Homo saplens similar to Olfactory receptor 4C12 (LOC283093), mRNA XM\_210180 Homo sapiens similar to odorant receptor HOR3beta2 (LOC283110), mRNA XM\_210181 Homo sapiens similar to odorant receptor HOR3beta1 (LOC283111), mRNA XM\_210184 Homo sapiens similar to tripartite motif-containing 43 (LOC283117), mRNA XM\_210186 Homo saplens similar to Olfactory receptor 8B4 (LOC283162), mRNA XM 210193 Homo saplens similar to Olfactory receptor 9G4 (LOC283189), mRNA XM 210196 Homo sapiens similar to seven transmembrane helix receptor (LOC283193), XM\_210242 Homo sapiens similar to olfactory receptor GA\_x6K02T2PULF-11031172-110 XM 210282 Homo sapiens similar to Olfactory receptor 4K5 (LOC283621), mRNA XM\_210324 Homo saplens similar to Vacuolar ATP synthase 16 kDa proteolipid subunit ( XM\_210334 Homo sapiens similar to 60S ribosomal protein L29 (Cell surface heparin bin-XM\_210365 Homo sapiens similar to Ribosomal protein L24-like (LOC284288), mRNA XM\_210382 Homo sapiens similar to Olfactory receptor 2Z1 (LOC284383), mRNA XM\_210394 Homo saplens similar to Contains similarity to extensin (atExt1) from Arabido XM\_210400 Homo sapiens similar to autoantigen NOR-90 (LOC285031), mRNA XM\_210411 Homo sapiens similar to Oligophrenin 1 (LOC285101), mRNA XM 210501 Homo sapiens similar to HSPC182 protein (LOC286528), mRNA XM\_210515 Homo saplens similar to testis specific protein, Y-linked (LOC286561), mRN/ XM\_210543 Homo sapiens similar to SPBPJ4664.02 (LOC285253), mRNA XM\_210557 Homo sapiens similar to heterochromatin-specific nonhistone protein (LOC2) XM\_210559 Homo sapiens similar to Retinoic acid receptor beta (RAR-beta) (RAR-epsilo XM\_210562 Homo sapiens hypothetical protein LOC285335 (LOC285335), mRNA XM\_210576 Homo sapiens similar to RIKEN cDNA 4921517D21 (LOC285405), mRNA XM\_210581 Homo sapiens claudin 22 (CLDN22), mRNA XM\_210613 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_210642 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 210752 Homo sapiens similar to Olfactory receptor 13C9 (LOC286362), mRNA XM 210755 Homo sapiens similar to Olfactory receptor 13D1 (LOC286365), mRNA XM 210787 Homo sapiens similar to Olfactory receptor 10H5 (LOC284433), mRNA

XM\_210826 Homo sapiens similar to Wiskott-Aldrich syndrome protein family member 4 ( XM\_210856 Homo sapiens similar to Ras suppressor protein 1 (LOC283029), mRNA

WC05944981 [file:///E:/WC05944981.qpd]

XM 210860 Homo sapiens hypothetical LOC283034 (LOC283034), mRNA XM 210876 Homo sapiens hypothetical LOC283065 (LOC283065), mRNA XM 210906 Homo sapiens hypothetical LOC283166 (LOC283166), mRNA XM 210908 Homo sapiens similar to RIKEN cDNA A930008A22 (LOC283157), mRNA XM 211009 Homo sapiens hypothetical LOC283389 (LOC283389), mRNA XM\_211028 Homo sapiens hypothetical protein LOC283403 (LOC283403), mRNA XM\_211040 Homo sapiens hypothetical LOC283440 (LOC283440), mRNA XM\_211079 Homo sapiens hypothetical LOC283530 (LOC283530), mRNA XM\_211086 Homo sapiens hypothetical LOC283553 (LOC283553), mRNA XM\_211088 Homo sapiens hypothetical LOC283604 (LOC283604), mRNA XM 211089 Homo sapiens hypothetical LOC283586 (LOC283586), mRNA XM 211090 Homo sapiens hypothetical protein LOC283587 (LOC283587), mRNA XM 211092 Homo sapiens hypothetical LOC283583 (LOC283583), mRNA XM 211108 Homo sapiens hypothetical LOC283584 (LOC283584), mRNA XM 211174 Homo sapiens hypothetical LOC283710 (LOC283710), mRNA XM\_211197 Homo sapiens hypothetical LOC283780 (LOC283780), mRNA XM\_211244 Homo sapiens hypothetical LOC283895 (LOC283895), mRNA XM\_211246 Homo sapiens similar to BTG3 associated nuclear protein isoform a; BANP I XM\_211251 Homo sapiens hypothetical LOC283902 (LOC283902), mRNA XM 211287 Homo sapiens hypothetical protein LOC283999 (LOC283999), mRNA XM 211291 Homo sapiens hypothetical protein LOC283994 (LOC283994), mRNA XM 211305 Homo sapiens hypothetical protein LOC284021 (LOC284021), mRNA XM 211339 Homo sapiens hypothetical LOC284120 (LOC284120), mRNA XM 211345 Homo sapiens hypothetical LOC284134 (LOC284134), mRNA XM 211367 Homo sapiens hypothetical LOC284184 (LOC284184), mRNA XM\_211403 Homo sapiens CD33 antigen-like 3 (CD33L3), mRNA XM\_211408 Homo saplens hypothetical LOC284260 (LOC284260), mRNA XM\_211413 Homo sapiens hypothetical LOC284275 (LOC284275), mRNA XM\_211422 Homo sapiens hypothetical LOC284303 (LOC284303), mRNA XM 211432 Homo sapiens hypothetical LOC284321 (LOC284321), mRNA XM\_211447 Homo sapiens hypothetical LOC284409 (LOC284409), mRNA XM\_211460 Homo sapiens hypothetical protein LOC284434 (LOC284434), mRNA XM\_211509 Homo sapiens hypothetical LOC284527 (LOC284527), mRNA XM 211518 Homo sapiens hypothetical LOC284555 (LOC284555), mRNA XM 211529 Homo sapiens hypothetical protein LOC284591 (LOC284591), mRNA XM 211557 Homo sapiens hypothetical LOC284623 (LOC284623), mRNA XM\_211573 Homo sapiens hypothetical LOC284646 (LOC284646), mRNA XM 211627 Homo sapiens hypothetical LOC284754 (LOC284754), mRNA XM\_211694 Homo sapiens hypothetical LOC284931 (LOC284931), mRNA XM\_211707 Homo sapiens hypothetical LOC284968 (LOC284968), mRNA XM\_211736 Homo sapiens hypothetical protein LOC285016 (LOC285016), mRNA XM 211749 Homo sapiens hypothetical LOC285047 (LOC285047), mRNA XM 211764 Homo sapiens hypothetical LOC285095 (LOC285095), mRNA XM 211768 Homo sapiens hypothetical LOC285110 (LOC285110), mRNA XM\_211805 Homo sapiens hypothetical protein LOC285205 (LOC285205), mRNA XM 211816 Homo sapiens hypothetical LOC285248 (LOC285248), mRNA XM 211837 Homo sapiens hypothetical LOC285307 (LOC285307), mRNA XM 211843 Homo sapiens hypothetical protein LOC285326 (LOC285326), mRNA XM 211853 Homo sapiens similar to hypothetical protein MG11009.4 (LOC285344), mRN XM\_211858 Homo sapiens hypothetical protein FLJ12205 (LOC285359), mRNA XM 211871 Homo sapiens hypothetical LOC285382 (LOC285382), mRNA XM\_211896 Homo sapiens hypothetical LOC285435 (LOC285435), mRNA XM 211908 Homo sapiens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B; XM 211923 Homo sapiens hypothetical LOC285509 (LOC285509), mRNA XM 211983 Homo sapiens hypothetical LOC285694 (LOC285694), mRNA XM 211988 Homo sapiens hypothetical LOC285711 (LOC285711), mRNA XM 211995 Homo sapiens hypothetical LOC285721 (LOC285721), mRNA

XM 212013 Homo sapiens hypothetical LOC285777 (LOC285777), mRNA XM 212022 Homo sapiens hypothetical LOC285793 (LOC285793), mRNA XM 212061 Homo sapiens similar to THAP domain containing 5 (LOC285872), mRNA XM 212067 Homo sapiens hypothetical LOC285890 (LOC285890), mRNA XM 212094 Homo sapiens hypothetical LOC285919 (LOC285919), mRNA XM 212123 Homo sapiens hypothetical LOC285995 (LOC285995), mRNA XM 212162 Homo sapiens similar to CG3104-PA (LOC286080), mRNA XM\_212170 Homo sapiens hypothetical protein LOC286094 (LOC286094), mRNA XM\_212238 Homo sapiens hypothetical protein LOC286235 (LOC286235), mRNA XM\_212241 Homo sapiens DKFZP434M131 protein (DKFZP434M131), mRNA XM\_212319 Homo sapiens hypothetical LOC286441 (LOC286441), mRNA XM\_212326 Homo sapiens hypothetical LOC286478 (LOC286478), mRNA XM 212581 Homo sapiens zinc finger protein 311 (ZNF311), mRNA XM 290185 Homo sapiens similar to hypothetical protein MGC5560 (LOC338598), mRN/ XM 290225 Homo saplens similar to pote protein; Expressed in prostate, ovary, testis, ar XM 290331 Homo sapiens gamma-glutamyltransferase 2 (GGT2), mRNA XM 290342 Homo saplens similar to immunoglobulin superfamily, member 3; immunoglo XM 290345 Homo sapiens similar to eukaryotic translation initiation factor 3, subunit 5 er. XM 290351 Homo saplens similar to Nedd-4-like ubiquitin-protein ligase WWP1 (WW do XM 290385 Homo sapiens similar to solute carrier family 29 (nucleoside transporters), m XM\_290389 Homo sapiens similar to solute carrier family 29 (nucleoside transporters), m-XM 290401 Homo sapiens hypothetical protein LOC340318 (LOC340318), mRNA XM 290462 Homo sapiens KIAA1674 (KIAA1674), mRNA XM 290463 Homo sapiens family with sequence similarity 22, member A (FAM22A), mRt XM 290482 Homo sapiens hypothetical protein FLJ10824 (FLJ10824), mRNA XM\_290501 Homo saplens hypothetical LOC338661 (LOC338661), mRNA XM 290502 Homo sapiens KIAA1030 protein (KIAA1030), mRNA XM 290506 Homo sapiens splicing factor 3b, subunit 2, 145kDa (SF3B2), mRNA XM 290509 Homo saplens hypothetical protein LOC338692 (LOC338692), mRNA XM 290516 Homo sapiens myotonic dystrophy protein kinase like protein (HSMDPKIN), r XM 290517 Homo sapiens KIAA0404 protein (KIAA0404), mRNA XM 290527 Homo sapiens ubiquitin specific protease 35 (USP35), mRNA XM 290536 Homo saplens CTD-blnding SR-like protein rA9 (KIAA1542), mRNA XM\_290546 Homo sapiens KIAA0830 protein (KIAA0830), mRNA XM 290547 Homo sapiens similar to Oligophrenin 1 (LOC338734), mRNA XM 290552 Homo sapiens cyclic nucleotide gated channel alpha 4 (CNGA4), mRNA XM 290558 Homo saplens similar to C1g-related factor precursor (LOC338761), mRNA XM 290559 Homo sapiens glutamate receptor interacting protein 1 (GRIP1), mRNA XM 290579 Homo sapiens hypothetical protein LOC338797 (LOC338797), mRNA XM 290592 Homo sapiens huntingtin interacting protein-1-related (HIP1R), mRNA XM 290597 Homo sapiens hypothetical protein LOC283464 (LOC283464), mRNA XM\_290598 Homo sapiens dendrin (DDN), mRNA XM 290600 Homo sapiens similar to Reticulocalbin 1 precursor (LOC338851), mRNA XM 290609 Homo sapiens hypothetical LOC338914 (LOC338914), mRNA XM 290615 Homo sapiens hypothetical protein DKFZp762F0713 (DKFZp762F0713), mR XM 290626 Homo sapiens similar to chromosome 1 open reading frame 36 (LOC338934 XM 290629 Homo sapiens chromosome 14 open reading frame 78 (C14orf78), mRNA XM 290631 Homo sapiens glucuronyl C5-epimerase (GLCE), mRNA XM 290645 Homo sapiens hypothetical protein DKFZp434J0617 (DKFZp434J0617), mR XM 290660 Homo sapiens similar to HP95 (LOC339003), mRNA XM\_290667 Homo sapiens KIAA0350 protein (KIAA0350), mRNA XM\_290670 Homo sapiens KIAA0220 protein (KIAA0220), mRNA XM\_290671 Homo sapiens hypothetical protein LOC339047 (LOC339047), mRNA XM 290684 Homo sapiens DKFZP434l216 protein (DKFZP434l216), mRNA

XM\_290702 Homo sapiens similar to My016 protein (LOC339088), mRNA
 XMC\_290704 Homo sapiens hypothetical protein FLJ12270 (FLJ12270), mRNA
 XM 290712 Homo sapiens hypothetical protein MGC46336 (MGC46336), mRNA

XM\_290714 Homo sapiens RAB43, member RAS oncogene family (RAB43), mRNA XM 290722 Homo sapiens similar to RIKEN cDNA 2610003J06 (LOC339123), mRNA XM 290732 Homo sapiens KIAA1917 protein (KIAA1917), mRNA XM 290734 Homo sapiens similar to ataxin 2 binding protein 1 isoform gamma; hexanibor XM 290737 Homo sapiens KIAA1871 protein (KIAA1871), mRNA XM\_290743 Homo sapiens similar to hypothetical protein FLJ36492 (LOC339184), mRN/ XM\_290755 Homo sapiens hypothetical protein FLJ35848 (FLJ35848), mRNA XM 290758 Homo sapiens KIAA0553 protein (KIAA0553), mRNA XM 290768 Homo sapiens KIAA1554 protein (KIAA1554), mRNA XM 290777 Homo sapiens hypothetical protein LOC339231 (LOC339231), mRNA XM 290780 Homo sapiens similar to Envoplakin (210 kDa paraneoplastic pemphigus ant XM 290781 Homo sapiens similar to Keratin, type I cytoskeletal 14 (Cytokeratin 14) (K14 XM\_290782 Homo sapiens similar to Keratln, type I cytoskeletal 16 (Cytokeratin 16) (K16 XM\_290786 Homo sapiens similar to endozepine-like protein (LOC339253), mRNA XM\_290793 Homo sapiens kinase suppressor of ras (KSR), mRNA XM\_290795 Homo sapiens hypothetical protein DKFZp667M2411 (DKFZp667M2411), ml XM\_290799 Homo saplens KIAA1501 protein (KIAA1501), mRNA XM 290809 Homo sapiens TAF4b RNA polymerase II, TATA box binding protein (TBP)-a XM 290811 Homo sapiens KIAA1713 protein (KIAA1713), mRNA XM 290817 Homo sapiens hypothetical protein FLJ34907 (FLJ34907), mRNA XM 290818 Homo sapiens Spir-1 protein (Spir-1), mRNA XM 290820 Homo sapiens hypothetical protein FLJ10211 (FLJ10211), mRNA XM\_290822 Homo saplens hypothetical protein LOC284367 (LOC284367), mRNA XM\_290829 Homo sapiens homolog of Drosophila Intersex (Intersex), mRNA XM\_290831 Homo sapiens hypothetical protein LOC339321 (LOC339321), mRNA XM 290835 Homo sapiens zinc finger protein 181 (HHZ181) (ZNF181), mRNA XM 290838 Homo saplens hypothetical protein LOC339324 (LOC339324), mRNA XM\_290842 Homo sapiens leucine rich repeat and fibronectin type III domain containing XM\_290848 Homo sapiens hypothetical protein LOC339344 (LOC339344), mRNA XM 290850 Homo sapiens glutamate receptor, ionotropic, N-methyl-D-aspartate 3B (GRI XM 290854 Homo sapiens G protein-coupled receptor 108 (GPR108), mRNA XM 290865 Homo sapiens similar to Zinc finger protein 93 (Zinc finger protein HTF34) (L XM\_290866 Homo sapiens similar to 4930572L20Rik protein (LOC339377), mRNA XM\_290867 Homo sapiens RalGEF-like protein 3, mouse homolog (RGL3), mRNA XM\_290872 Homo sapiens similar to Pyruvate kinase, M2 isozyme (LOC339395), mRNA XM\_290902 Homo sapiens hypothetical protein LOC339448 (LOC339448), mRNA XM\_290922 Homo sapiens hypothetical protein MGC27277 (MGC27277), mRNA XM 290923 Homo sapiens KIAA1639 protein (KIAA1639), mRNA XM 290925 Homo saplens hypothetical LOC339494 (LOC339494), mRNA XM\_290927 Homo sapiens similar to bA476I15.3 (novel protein similar to septin) (LOC33: XM 290936 Homo sapiens hypothetical protein MGC35030 (MGC35030), mRNA XM 290941 Homo sapiens prion protein interacting protein (PRNPIP), mRNA XM 290944 Homo saplens KIAA0842 protein (KIAA0842), mRNA XM\_290948 Homo sapiens hypothetical protein LOC343071 (LOC343071), mRNA XM\_290949 Homo saplens similar to hypothetical protein (LOC339553), mRNA XM 290972 Homo sapiens novel C3HC4 type Zinc finger (ring finger) (FLJ12747), mRNA XM 290973 Homo sapiens solute carrier family 35, member E4 (SLC35E4), mRNA XM 290985 Homo sapiens hypothetical protein LOC339692 (LOC339692), mRNA XM\_290994 Homo sapiens similar to speckle-type POZ protein (LOC339744), mRNA XM 291001 Homo sapiens myosin VIIB (MYO7B), mRNA XM 291005 Homo sapiens similar to 25-hydroxyvitamin D-1 alpha hydroxylase, mitochon XM\_291007 Homo sapiens hypothetical protein LOC339766 (LOC339766), mRNA XM\_291015 Homo sapiens likely homolog of rat kinase D-interacting substance of 220 kE XM\_291016 Homo sapiens similar to RIKEN cDNA 1700093K21 (LOC339804), mRNA XM 291017 Homo sapiens similar to PRO1094 (LOC339793), mRNA XM\_291019 Homo sapiens hypothetical protein FLJ13305 (FLJ13305), mRNA XM\_291020 Homo sapiens KIAA2012 protein (LOC339809), mRNA

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WO 2005/044981 XM\_291028 Homo sapiens hypothetical protein DKFZp434A128 (DKFZp434A128), mRN<sub>I</sub> XM\_291054 Homo sapiens similar to beta-1,4-mannosyltransferase; beta-1,4 mannosyltra XM\_291055 Homo sapiens KIAA1268 protein (KIAA1268), mRNA XM 291057 Homo sapiens cytoplasmic linker associated protein 2 (CLASP2), mRNA XM 291059 Homo sapiens hypothetical protein LOC339896 (LOC339896), mRNA XM 291062 Homo sapiens similar to K06A9.1b.p (KIAA2018), mRNA XM 291063 Homo sapiens hypothetical protein LOC339903 (LOC339903), mRNA XM 291064 Homo sapiens KIAA0540 protein (KIAA0540), mRNA XM\_291074 Homo sapiens hypothetical protein FLJ33674 (FLJ33674), mRNA XM\_291075 Homo sapiens hypothetical LOC339926 (LOC339926), mRNA XM\_291077 Homo sapiens hypothetical protein BC009862 (LOC90113), mRNA XM\_291080 Homo sapiens KIAA0804 protein (KIAA0804), mRNA XM 291085 Homo sapiens KIAA1204 protein (CDGAP), mRNA XM\_291088 Homo sapiens similar to hypothetical protein SB153 isoform 1 (LOC339944), XM 291095 Homo sapiens similar to glutamate receptor, ionotropic, N-methyl D-aspartati XM 291099 Homo sapiens similar to Hypothetical protein MGC38937 (LOC339977), mRt XM 291105 Homo sapiens transcriptional adaptor 2 (ADA2 homolog, yeast)-beta (MGC2 XM 291106 Homo sapiens KIAA0232 gene product (KIAA0232), mRNA XM 291111 Homo sapiens G protein-coupled receptor 125 (GPR125), mRNA XM 291117 Homo sapiens similar to succinate dehydrogenase flavoprotein subunit (LOC XM 291120 Homo sapiens hypothetical protein LOC340024 (LOC340024), mRNA XM\_291128 Homo sapiens KIAA1311 protein (KIAA1311), mRNA XM\_291137 Homo sapiens similar to hypothetical protein D630003M21 (LOC389256), mf XM\_291139 Homo sapiens similar to RIKEN cDNA 9330196J05 (LOC340075), mRNA XM\_291141 Homo sapiens KIAA0303 protein (KIAA0303), mRNA XM\_291142 Homo sapiens hypothetical protein BC014311 (LOC115548), mRNA XM 291144 Homo saplens similar to bA110H4.2 (similar to membrane protein) (LOC3400 XM\_291154 Homo sapiens similar to hypothetical protein D730019B10 (LOC340152), mF XM\_291159 Homo saplens ion transporter protein (DKFZP434F011), mRNA XM 291161 Homo sapiens similar to developmental pluripotency associated 5; embryona XM\_291169 Homo sapiens similar to precursor peptide (LOC340204), mRNA XM\_291170 Homo sapiens similar to Hypothetical protein KIAA0036 (LOC340192), mRN, XM\_291181 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM\_291200 Homo sapiens similar to CAGL79 (LOC340221), mRNA XM\_291202 Homo sapiens zinc finger protein 479 (ZNF479), mRNA XM\_291204 Homo sapiens hypothetical LOC340228 (LOC340228), mRNA XM\_291208 Homo saplens similar to hypothetical ZNF-like protein (LOC340246), mRNA XM 291222 Homo sapiens DKFZP586J0619 protein (DKFZP586J0619), mRNA XM\_291223 Homo sapiens myosin IG (MYO1G), mRNA XM 291241 Homo sapiens intracellular membrane-associated calcium-independent phos XM\_291247 Homo saplens similar to Piccolo protein (Aczonin) (LOC389530), mRNA XM 291253 Homo sapiens KIAA0146 protein (KIAA0146), mRNA XM\_291261 Homo sapiens zinc finger protein 517 (ZNF517), mRNA XM\_291262 Homo sapiens zinc finger protein 251 (ZNF251), mRNA XM\_291266 Homo saplens 5-oxoprolinase (ATP-hydrolysing) (OPLAH), mRNA XM\_291268 Homo sapiens glutamate receptor, ionotropic, N-methyl D-asparate-associate XM\_291269 Homo sapiens hypothetical protein KIAA1875 (KIAA1875), mRNA XM\_291270 Homo saplens similar to unnmaed protein product (LOC340393), mRNA XM\_291277 Homo sapiens hypothetical protein DKFZp761P0423 (DKFZp761P0423), mF XM\_291282 Homo sapiens hypothetical protein LOC157697 (LOC157697), mRNA

- XM\_291282 Homo sapiens hypothetical protein LOC157697 (LOC157697), mRNA
  XM\_291291 Homo sapiens KIAA0725 protein (KIAA0725), mRNA
  XM\_291314 Homo sapiens F-box only protein 10 (FBX010), mRNA
  XM\_291315 Homo sapiens KIAA1815 (KIAA1815), mRNA
- XM\_291321 Homo sapiens similar to Nance-Horan syndrome protein (LOC340527), mRN
   XM\_291322 Homo sapiens KIAA2001 protein (KIAA2001), mRNA
- XM\_291326 Homo sapiens KIAA2001 protein (KIAA2001), mRNA
- XM\_291334 Homo sapiens similar to hypothetical protein MGC15737 (LOC340543), mRN

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XM, 291335 Homo sapiens hypothetical protein LOC340542 (LOC340542), mRNA XM\_291339 Homo sapiens hypothetical protein LOC340562 (LOC340562), mRNA XM 291344 Homo sapiens hypothetical protein FLJ12649 (FLJ12649), mRNA XM 291345 Homo sapiens KIAA0522 protein (KIAA0522), mRNA XM 291346 Homo sapiens similar to carbonic anhydrase VB, mitochondrial precursor, ca XM\_291378 Homo sapiens similar to C4b-binding protein alpha chain precursor (C4bp) (F XM 291387 Homo sapiens similar to DAAT9248 (LOC339398), mRNA XM 291392 Homo sapiens similar to Arylacetamide deacetylase (AADAC) (LOC343066), XM 291394 Homo sapiens hypothetical protein LOC343068 (LOC343068), mRNA XM 291395 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein C-like dJE XM 291396 Homo sapiens similar to Hypothetical protein DJ845O24.2 (LOC400735), mF XM 291400 Homo sapiens similar to chromosome 14 open reading frame 24 (LOC34308 XM 291419 Homo sapiens G protein-coupled receptor 153 (GPR153), mRNA XM\_291428 Homo saplens similar to ribosomal protein L26 (LOC343153), mRNA XM 291435 Homo sapiens similar to Olfactory receptor 6F1 (LOC343169), mRNA XM 291436 Homo saplens similar to Olfactory receptor 5AY1 (LOC343170), mRNA XM\_291437 Homo sapiens offactory receptor, family 1, subfamily C, member 1 (OR1C1), XM 291438 Homo sapiens similar to seven transmembrane helix receptor (LOC343171), XM 291439 Homo saplens similar to seven transmembrane helix receptor (LOC343172), XM 291441 Homo sapiens similar to Olfactory receptor 2T3 (LOC343173), mRNA XM 291464 Homo sapiens similar to KIAA0433 protein (LOC343221), mRNA XM\_291485 Homo sapiens similar to Myosin-binding protein H (MyBP-H) (H-protein) (LOC XM\_291508 Homo sapiens similar to Famesyl pyrophosphate synthetase (FPP synthetas XM 291533 Homo saplens similar to basic transcription factor 3 (LOC343363), mRNA XM\_291543 Homo sapiens similar to KIAA0454 protein (LOC343381), mRNA XM\_291544 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC343384), mRI XM\_291548 Homo sapiens similar to Olfactory receptor 10R2 (LOC343406), mRNA XM 291569 Homo saplens similar to IFGP6 (LOC343413), mRNA XM 291577 Homo sapiens similar to RIKEN cDNA 1810009O10 (LOC339521), mRNA XM 291584 Homo saplens similar to Phosphorylase B kinase alpha regulatory chain, ske XM 291607 Homo sapiens similar to dJ1182A14.5.1 (novel gene (Isoform 1)) (LOC34350 XM 291623 Homo sapiens similar to hypothetical protein 4833401D15 (LOC343521), mF XM 291625 Homo sapiens similar to Hypothetical protein DJ845O24.2 (LOC374947), mF XM 291627 Homo sapiens similar to oral cancer overexpressed 2; transmembrane protei XM 291638 Homo sapiens hypothetical protein LOC343070 (LOC343070), mRNA XM\_291643 Homo sapiens similar to Ig kappa chain (LOC339562), mRNA XM\_291645 Homo sapiens similar to Olfactory receptor 2T5 (LOC343563), mRNA XM\_291663 Homo sapiens similar to bA304I5.1 (novel lipase) (LOC340654), mRNA XM 291671 Homo sapiens hypothetical protein LOC282996 (LOC282996), mRNA XM 291697 Homo sapiens similar to RIKEN cDNA A930010E21 (LOC340745), mRNA XM 291698 Homo sapiens similar to Rpl7a protein (LOC340749), mRNA XM 291704 Homo sapiens similar to double homeobox, 4; double homeobox protein 4 (L. XM 291716 Homo sapiens similar to NK-type homeobox (LOC340784), mRNA XM 291723 Homo sapiens protein RAKc (LOC340811), mRNA XM 291725 Homo saplens alpha 2,8-slalyttransferase (ST8SIA-VI), mRNA XM\_291726 Homo sapiens similar to protein of unknown function (LOC340843), mRNA XM\_291729 Homo sapiens TAF3 RNA polymerase II, TATA box binding protein (TBP)-as XM\_291741 Homo sapiens dual specificity phosphatase and pro isomerase domain conta XM\_291745 Homo sapiens similar to 40S ribosomal protein S26 (LOC338611), mRNA XM\_291757 Homo sapiens similar to protein of unknown function (LOC340893), mRNA XM 291763 Homo sapiens similar to bA508N22.1 (HSPC025) (LOC340947), mRNA XM 291767 Homo sapiens similar to hypothetical protein FLJ10213 (LOC340900), mRN/ XM 291770 Homo sapiens similar to breast cancer antigen NY-BR-1 (LOC340913), mRN XM 291771 Homo sapiens similar to HSPC132 (LOC338617), mRNA XM\_291786 Homo saplens similar to Phosphorylase B kinase gamma catalytic chain, ske XM\_291793 Homo sapiens similar to Chain A, Crystal Structure Of The Radixin Ferm Dor XM\_291806 Homo sapiens similar to seven transmembrane helix receptor (LOC340980),

XM\_291816 Homo sapiens otogelin (OTOG), mRNA XM 291838 Homo sapiens similar to Olfactory receptor 8D4 (LOC338662), mRNA XM 291857 Homo sapiens similar to ENSANGP00000020885 (LOC341098), mRNA XM 291859 Homo sapiens olfactory receptor, family 5, subfamily F, member 1 (OR5F1). XM 291862 Homo sapiens similar to Olfactory receptor 5AP2 (LOC338675), mRNA XM 291885 Homo sapiens similar to Tryptophanyl-tRNA synthetase (Tryptophan~tRNA li XM 291892 Homo sapiens similar to offactory receptor MOR101-1 (LOC341152), mRNA XM 291924 Homo sapiens similar to Offactory receptor 4F3 (LOC338718), mRNA XM 291943 Homo sapiens similar to Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongati XM 291947 Homo sapiens hephaestin-like (LOC341208), mRNA XM\_291974 Homo sapiens similar to hypothetical protein FLJ33167 (LOC338750), mRN/ XM\_291977 Homo sapiens similar to Olfactory receptor 52L1 (LOC338751), mRNA XM 291980 Homo sapiens similar to Olfactory receptor 2AG1 (HT3) (LOC338755), mRN/ XM 291981 Homo sapiens similar to hP4 olfactory receptor (LOC341276), mRNA XM 291986 Homo sapiens offactory receptor, family 10, subfamily A, member 3 (OR10A: XM 291989 Homo saplens similar to hypothetical protein (LOC338756), mRNA XM 291991 Homo sapiens similar to protein tyrosine phosphatase, receptor type, Q isofo XM 292012 Homo sapiens similar to Polyadenylate-binding protein 1 (Poly(A)-binding pro XM 292021 Homo sapiens similar to hypothetical protein (LOC341346), mRNA XM 292023 Homo saplens similar to ribosomal protein L31 (LOC341356), mRNA XM 292027 Homo sapiens similar to Dag1-prov protein (LOC341370), mRNA XM\_292029 Homo sapiens hypothetical LOC341371 (LOC341371), mRNA XM\_292035 Homo sapiens similar to olfactory specific medium-chain acyl CoA synthetas XM\_292046 Homo sapiens similar to ribosomal protein L31 (LOC341412), mRNA XM\_292048 Homo sapiens similar to Heat shock factor protein 2 (HSF 2) (Heat shock trail XM\_292049 Homo sapiens similar to olfactory receptor MOR114-1 (LOC341416), mRNA XM 292051 Homo saplens similar to Olfactory receptor 6C4 (LOC341418), mRNA XM 292064 Homo sapiens similar to fertilin alpha subunit (LOC338792), mRNA XM 292085 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC341457), mRI XM 292093 Homo sapiens liver-specific organic anion transporter 3 (LST-3), mRNA XM 292098 Homo sapiens similar to hypothetical protein (LOC341461), mRNA XM 292109 Homo sapiens similar to 60S ribosomal protein L23a (LOC341511), mRNA XM 292122 Homo saplens similar to neurofilament-like protein (LOC338829), mRNA XM\_292136 Homo sapiens similar to seven transmembrane helix receptor (LOC341568), XM\_292160 Homo sapiens similar to Serine/threonine-protein kinase Nek1 (NimA-related XM\_292184 Homo sapiens similar to immune-responsive gene 1 (LOC341720), mRNA XM 292193 Homo sapiens hypothetical protein DKFZp686J0811 (DKFZp686J0811), mR XM\_292197 Homo sapiens similar to bA215B13.2 (fumarate hydratase (FH) pseudogene XM 292210 Homo saplens similar to ribosomal protein S12 (LOC338870), mRNA XM 292225 Homo sapiens similar to putative pancreatic ribonuclease (LOC338879), mRI XM 292227 Homo saplens similar to Olfactory receptor 6S1 (LOC341799), mRNA XM 292260 Homo saplens solute carrier family 35, member F4 (SLC35F4), mRNA XM 292301 Homo sapiens similar to developmental pluripotency associated 5; embryona XM\_292357 Homo sapiens similar to Golgi autoantigen, golgin subfamily A member 6 (Go XM 292384 Homo saplens similar to zinc finger protein 29 (LOC342132), mRNA XM\_292389 Homo sapiens similar to ATP-binding cassette, sub-family B, member 10, mil XM\_292394 Homo sapiens similar to hypothetical protein FLJ35785 (LOC342167), mRN/ XM\_292468 Homo sapiens similar to hypothetical protein (LOC342293), mRNA XM 292503 Homo sapiens similar to hypothetical protein (LOC342355), mRNA XM\_292504 Homo sapiens similar to hypothetical protein FLJ35867 (LOC342357), mRN/ XM 292512 Homo sapiens similar to Ataxin-1 (Spinocerebellar ataxia type 1 protein homo XM 292527 Homo sapiens similar to Hypothetical protein MGC67567 (LOC342409), mRt XM 292562 Homo sapiens similar to c439A6.1 (novel protein similar to heparan sulfate (s XM 292573 Homo sapiens similar to testicular Metalloprotease-like, Disintegrin-like, Cyst XM 292596 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC342541), mRI XM 292624 Homo sapiens similar to hypothetical protein 4932411E22 (LOC342600), mR XM 292627 Homo sapiens olfactory receptor, family 4, subfamily D, member 1 (OR4D1),

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XM\_292664 Homo sapiens similar to NADH-ubiquinone oxidoreductase 15 kDa subunit (0 XM 292674 Homo sapiens similar to leucine-rich repeat domain-containing protein (LOC) XM\_292678 Homo sapiens similar to RIKEN cDNA 2610040E16 (LOC339291), mRNA XM\_292700 Homo sapiens similar to 40S ribosomal protein S2 (LOC342808), mRNA XM 292707 Homo sapiens similar to TFIIH basal transcription factor complex p62 subuni XM 292717 Homo sapiens similar to KIAA1074 protein (LOC342850), mRNA XM\_292723 Homo sapiens similar to zinc finger protein 495 (LOC342933), mRNA XM\_292724 Homo sapiens similar to zinc finger protein 495 (LOC342934), mRNA XM\_292729 Homo sapiens similar to double homeobox protein (LOC342939), mRNA XM 292740 Homo sapiens hypothetical protein LOC342892 (LOC342892), mRNA XM 292745 Homo sapiens similar to F-box only protein 2 (LOC342897), mRNA XM\_292765 Homo sapiens zinc finger protein 404 (ZNF404), mRNA XM\_292778 Homo sapiens leucine-rich repeats and immunoglobulin-like domains 4 (LRI( XM\_292779 Homo sapiens hypothetical LOC342918 (LOC342918), mRNA XM\_292784 Homo sapiens similar to hypothetical protein (LOC339351), mRNA XM\_292785 Homo sapiens similar to contains transmembrane (TM) region (LOC342865). XM\_292796 Homo sapiens similar to ret finger protein-like 1 (LOC342931), mRNA XM\_292803 Homo saplens similar to Hypothetical protein CBG18249 (LOC342959), mRN XM\_292810 Homo sapiens similar to Zinc finger protein 20 (Zinc finger protein KOX13) (E XM 292813 Homo sapiens similar to hypothetical protein FLJ38281 (LOC342972), mRN/ XM\_292817 Homo sapiens similar to actin 3 - fruit fly (Drosophila melanogaster) (fragmer XM\_292819 Homo saplens nanos homolog 3 (Drosophila) (NANOS3), mRNA XM\_292820 Homo sapiens hypothetical LOC342979 (LOC342979), mRNA XM 292824 Homo sapiens similar to hypothetical protein MGC45408 (LOC342969), mRN XM\_292832 Homo sapiens similar to hypothetical protein FLJ12488 (LOC342991), mRN/ XM\_292836 Homo sapiens similar to ribosomal protein L34; 60S ribosomal protein L34 (L XM\_292850 Homo sapiens similar to pMesogenin1 (LOC343930), mRNA XM 292873 Homo sapiens similar to 2010300C02Rik protein (LOC343990), mRNA XM 292889 Homo sapiens similar to Gnot1 homeodomain protein (LOC344022), mRNA XM 292895 Homo sapiens similar to zinc finger protein 135 (clone pHZ-17); zinc finger pr XM 292943 Homo sapiens Nck-associated protein 5 (NAP5), mRNA XM 292957 Homo sapiens similar to anaphase promoting complex subunit 1; anaphase-XM\_292958 Homo sapiens similar to FoxI1c protein (LOC344167), mRNA XM\_292963 Homo saplens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC3441 XM\_292968 Homo saplens similar to Homeobox even-skipped homolog protein 2 (EVX-2) Homo saplens similar to pote protein; Expressed in prostate, ovary, testis, ar XM 292982 Homo sapiens similar to Fatty acid-binding protein, epidermal (E-FABP) (Psc XM 293018 XM 293026 Homo sapiens similar to UNR-interacting protein (WD-40 repeat protein PT-V XM\_293029 Homo sapiens similar to cyclin-dependent kinase-like 1 (CDC2-related kinase XM 293034 Homo sapiens similar to RIKEN cDNA 2010316F05 (LOC344405), mRNA XM 293042 Homo sapiens similar to ribosomal protein S12 (LOC344423), mRNA XM 293090 Homo saplens FLJ00204 protein (FLJ00204), mRNA XM\_293092 Homo saplens G protein-coupled receptor 148 (GPR148), mRNA XM 293097 Homo sapiens similar to VsaA -like protein (LOC343565), mRNA XM\_293104 Homo sapiens similar to dJ132F21.2 (Contains a novel protein similar to the XM\_293106 Homo sapiens similar to hypothetical protein FLJ32191 (LOC343593), mRN/ XM\_293121 Homo sapiens similar to bA379F14.2 (novel protein) (LOC343629), mRNA XM\_293123 Homo sapiens similar to dJ1100H13.4 (putative RhoGAP domain containing XM 293157 Homo sapiens similar to beta-galactoside alpha-2,3-sialytransferase (LOC32 XM\_293160 Homo sapiens similar to dJ310O13.4 (novel protein similar to predicted C. el-XM 293177 Homo sapiens similar to Zinc finger protein 85 (Zinc finger protein HPF4) (HT XM 293225 Homo sapiens similar to RIKEN cDNA 4930583C14 (LOC343854), mRNA XM 293226 Homo sapiens similar to POM121 membrane glycoprotein-like 1 (LOC34385) XM 293276 Homo sapiens similar to Heat shock 27 kDa protein (HSP 27) (Stress-respon XM 293284 Homo sapiens similar to Zinc finger protein 81 (HFZ20) (LOC347344), mRN/ XM\_293293 Homo sapiens similar to BMP-2 inducible protein kinase (BIKe) (HRIHFB201 XM 293312 Homo sapiens similar to H3 histone, family 3B (LOC347376), mRNA

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XM 293320 Homo sapiens similar to bA370B6.1 (similar to histone H2B) (LOC347393), n XM 293325 Homo sapiens similar to ENSANGP00000015797 (LOC347411), mRNA XM 293332 Homo sapiens similar to RIKEN cDNA 1700113O17 (LOC340549), mRNA XM 293334 Homo sapiens similar to KIAA1726 protein (LOC340554), mRNA XM 293342 Homo sapiens similar to TGF beta-inducible nuclear protein 1 (Hairy cell leuk XM\_293352 Homo sapiens similar to P38IP protein (LOC347438), mRNA XM 293354 Homo sapiens similar to H326 (LOC347442), mRNA XM\_293360 Homo sapiens similar to hSIAH1 (LOC340571), mRNA XM\_293366 Homo sapiens similar to Olfactory receptor 13H1 (LOC347468), mRNA XM\_293380 Homo sapiens similar to hypothetical protein A630014H24 (LOC347454), mF XM\_293387 Homo sapiens similar to KIAA1892-like (LOC340578), mRNA XM\_293396 Homo sapiens similar to Heat shock transcription factor, Y-linked (Heat shock XM\_293398 Homo sapiens RAB41, member RAS homolog family (RAB41), mRNA XM\_293401 Homo sapiens similar to arylsulfatase (LOC347527), mRNA XM\_293405 Homo sapiens similar to hypothetical protein D430021l08 (LOC340595), mR XM 293407 Homo sapiens similar to melanoma antigen 2 (LOC347541), mRNA XM\_293412 Homo sapiens similar to ribosomal protein L18a; 60S ribosomal protein L18a XM\_293416 Homo sapiens similar to nuclear protein p30 (LOC347549), mRNA XM\_293449 Homo sapiens similar to CYorf16 protein (LOC389915), mRNA XM\_293460 Homo sapiens similar to testis specific protein, Y-linked (LOC347596), mRN/ XM 293514 Homo sapiens similar to CG17293-PA (LOC344620), mRNA XM 293529 Homo sapiens similar to RIKEN cDNA 4930558O21 (LOC344657), mRNA XM\_293542 Homo sapiens similar to Elongation factor 1-gamma (EF-1-gamma) (eEF-1B XM\_293565 Homo sapiens similar to seven transmembrane helix receptor (LOC344729). XM\_293570 Homo saplens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM 293577 Homo sapiens similar to Arylacetamide deacetylase (AADAC) (LOC344752), XM\_293580 Homo sapiens G protein-coupled receptor 149 (GPR149), mRNA XM 293581 Homo sapiens similar to seven transmembrane helix receptor (LOC344760), XM\_293596 Homo sapiens similar to peptidylprolyl isomerase A (LOC344797), mRNA XM\_293599 Homo sapiens type II transmembrane serine protease 7 (TMPRSS7), mRNA XM\_293633 Homo sapiens similar to Protein MGC35450/QtsA-16602 (LOC344892), mR1 XM\_293656 Homo sapiens similar to ENSANGP00000007226 (LOC339951), mRNA XM 293669 Homo sapiens similar to actinin, alpha 4 (LOC344978), mRNA XM\_293671 Homo sapiens similar to GTP-binding protein SAR1a (COPII-associated sma XM\_293680 Homo sapiens similar to MGC53273 protein (LOC345051), mRNA XM\_293687 Homo sapiens similar to RIKEN cDNA 5730467H21 (LOC345079), mRNA XM\_293715 Homo sapiens similar to CG13722-PA (LOC345156), mRNA XM\_293745 Homo sapiens hypothetical LOC345222 (LOC345222), mRNA XM 293801 Homo sapiens similar to CG32656-PA (LOC345375), mRNA XM 293802 Homo saplens similar to UDP-glucuronosyltransferase 2B15 precursor, micro XM\_293821 Homo sapiens similar to profilin 3 (LOC345456), mRNA XM\_293828 Homo sapiens similar to hypothetical protein 9630041N07 (LOC345462), mF XM 293829 Homo sapiens similar to UNR protein (LOC345463), mRNA XM\_293868 Homo sapiens similar to hypothetical protein (LOC345537), mRNA XM\_293875 Homo sapiens similar to RIKEN cDNA B130016O10 gene (LOC345557), mR XM 293886 Homo sapiens similar to Ubiquitin carboxyl-terminal hydrolase 7 (Ubiquitin th XM 293893 Homo sapiens LRG-47-like protein (LRG47), mRNA XM\_293903 Homo saplens similar to fibrillarin (LOC345630), mRNA XM\_293911 Homo sapiens hypothetical protein FLJ40191 (FLJ40191), mRNA XM 293918 Homo sapiens similar to geminin (LOC345643), mRNA XM 293923 Homo sapiens similar to protease (prosome, macropain) 26S subunit, ATPas XM 293924 Homo sapiens similar to RIKEN cDNA 4732495G21 gene (LOC345651), mR XM\_293927 Homo sapiens similar to template acyivating factor-I alpha (LOC345659), mF XM\_293937 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC345711), mRNA XM 293943 Homo sapiens similar to histone (15.4 kD) (his-72) (LOC340096), mRNA XM 293971 Homo sapiens similar to hypothetical protein (LOC345778), mRNA XM\_293976 Homo sapiens similar to RIKEN cDNA 6430502M16 gene (LOC340120), mR

XM\_293984 Homo sapiens similar to Transcription factor BTF3 (RNA polymerase B trans XM 294017 Homo sapiens solute carrier family 35, member D3 (SLC35D3), mRNA XM 294019 Homo sapiens similar to Ect2 protein (LOC345930), mRNA XM 294070 Homo sapiens similar to Glyceraldehyde 3-phosphate dehydrogenase, liver ( XM 294077 Homo sapiens similar to dJ153G14.3 (novel C2H2 type Zinc Finger protein) ( XM\_294093 Homo sapiens similar to bA145L22.2 (novel KRAB box containing C2H2 type XM\_294139 Homo sapiens chromosome 6 open reading frame 143 (C6orf143), mRNA XM\_294165 Homo sapiens similar to septin 10 isoform 1 (LOC346288), mRNA XM 294209 Homo sapiens similar to Unc4.1 homeobox (LOC340260), mRNA XM 294219 Homo sapiens similar to RIKEN cDNA A930017N06 gene (LOC346355), mR XM 294247 Homo sapiens similar to Splicing factor, arginine/serine-rich, 46kD (LOC3464 XM 294249 Homo sapiens similar to GluR-delta2 philic-protein (LOC340265), mRNA XM\_294261 Homo sapiens similar to hypothetical protein FLJ22527 (LOC346545), mRN/ XM 294265 Homo sapiens similar to envelope protein (LOC346547), mRNA XM 294310 Homo sapiens similar to Olfactory recentor 6V1 (LOC346517), mRNA XM 294311 Homo sapiens similar to Histidine triad nucleotide-binding protein 1 (Adenosi XM 294316 Homo sapiens similar to Olfactory receptor 2A12 (LOC346525), mRNA XM\_294318 Homo sapiens similar to Olfactory receptor 2A1 (LOC346528), mRNA XM 294319 Homo sapiens similar to Importin alpha-2 subunit (Karyopherin alpha-2 subur XM\_294328 Homo sapiens similar to Protein C6orf66 (HSPC125) (My013 protein) (LOC3 XM\_294353 Homo saplens similar to RIKEN cDNA 6332401019 gene (LOC340344), mR XM 294354 Homo sapiens similar to 40S ribosomal protein S2 (LOC346643), mRNA XM\_294357 Homo sapiens hypothetical protein LOC346653 (LOC346653), mRNA XM\_294365 Homo sapiens similar to Na+/L-ascorbic acid transporter 1; SVCT1 (LOC346) XM\_294370 Homo sapiens guanine nucleotide binding protein, alpha transducing 3 (GNA XM\_294383 Homo sapiens similar to seven transmembrane helix receptor (LOC346708), XM 294387 Homo sapiens similar to hypothetical protein 8230402K04 (LOC340359), mF XM 294438 Homo sapiens similar to 60S RIBOSOMAL PROTEIN L5 (LOC346848), mRN XM\_294450 Homo sapiens similar to solute camer family 16 (monocarboxylic acid transp XM\_294456 Homo sapiens similar to putative nuclear protein (4B256) (LOC346910), mRI XM\_294468 Homo sapiens similar to H2A histone family, member Z (LOC346990), mRN/ XM 294473 Homo sapiens similar to ribosomal protein L37 (LOC346950), mRNA XM 294478 Homo sapiens similar to Interferon-induced transmembrane protein 3 (Interfe XM\_294480 Homo saplens similar to pote protein; Expressed in prostate, ovary, testis, an XM\_294521 Homo sapiens FLJ43950 protein (FLJ43950), mRNA XM\_294531 Homo sapiens similar to Olfactory receptor 1J1 (LOC347168), mRNA XM\_294533 Homo sapiens olfactory receptor, family 1, subfamily J, member 4 (OR1J4), r XM 294534 Homo saplens similar to Olfactory receptor 1B1 (Olfactory receptor 9-B) (OR: XM 294540 Homo sapiens similar to cancer related gene-liver 1 (LOC340485), mRNA XM 294567 Homo sapiens similar to bA113O24.1 (similar to insulin-like growth factor bin XM 294568 Homo sapiens similar to transcription elongation factor IIS - mouse (LOC340 XM 294574 Homo saplens similar to A-kinase anchor protein 8; A-kinase anchor protein. XM 294581 Homo sapiens similar to ribosomal protein L36; 60S ribosomal protein L36 (L XM 294584 Homo sapiens similar to hypothetical protein FLJ40432 (LOC347262), mRNA XM\_294590 Homo sapiens similar to bA13B9.3 (novel protein similar to KRT8) (LOC3472 XM\_294592 Homo saplens similar to RIKEN cDNA 2310039E09 (LOC347273), mRNA XM\_294634 Homo sapiens similar to alpha-2 macroglobulin family protein VIP (LOC3402 XM 294666 Homo sapiens hypothetical LOC338616 (LOC338616), mRNA XM 294675 Homo sapiens hypothetical protein LOC338667 (LOC338667), mRNA XM 294680 Homo sapiens hypothetical protein LOC338694 (LOC338694), mRNA XM 294688 Homo sapiens hypothetical LOC338731 (LOC338731), mRNA XM 294692 Homo sapiens hypothetical LOC338749 (LOC338749), mRNA XM 294723 Homo sapiens hypothetical LOC338825 (LOC338825), mRNA XM 294743 Homo sapiens hypothetical LOC338918 (LOC338918), mRNA XM 294750 Homo sapiens hypothetical LOC338951 (LOC338951), mRNA XM 294751 Homo sapiens similar to RIKEN cDNA 4930425N13 (LOC338949), mRNA XM 294765 Homo sapiens similar to FLJ40113 protein (LOC388154), mRNA

XM 294775 Homo sapiens hypothetical LOC339022 (LOC339022), mRNA XM\_294778 Homo sapiens hypothetical LOC339025 (LOC339025), mRNA XM 294794 Homo sapiens similar to putative membrane-bound dipeptidase-2 (LOC3390 XM 294802 Homo sapiens hypothetical LOC339077 (LOC339077), mRNA XM 294854 Homo sapiens hypothetical LOC339209 (LOC339209), mRNA XM\_294867 Homo sapiens hypothetical LOC339226 (LOC339226), mRNA XM 294894 Homo sapiens hypothetical LOC339281 (LOC339281), mRNA XM\_294906 Homo sapiens hypothetical LOC339306 (LOC339306), mRNA XM\_294910 Homo sapiens hypothetical LOC339352 (LOC339352), mRNA XM 294914 Homo sapiens hypothetical LOC339358 (LOC339358), mRNA XM 294919 Homo sapiens hypothetical protein LOC339366 (LOC339366), mRNA XM 294922 Homo sapiens hypothetical LOC339375 (LOC339375), mRNA XM 294960 Homo sapiens hypothetical LOC339453 (LOC339453), mRNA XM\_294963 Homo sapiens LOC388583 (LOC388583), mRNA XM\_294993 Homo saplens hypothetical protein LOC339529 (LOC339529), mRNA XM\_294997 Homo sapiens hypothetical LOC339541 (LOC339541), mRNA XM 295007 Homo saplens hypothetical LOC339583 (LOC339583), mRNA XM 295017 Homo sapiens chromosome 21 open reading frame 54 (C21orf54), mRNA XM 295034 Homo sapiens hypothetical LOC339693 (LOC339693), mRNA XM\_295058 Homo sapiens hypothetical LOC339760 (LOC339760), mRNA XM\_295059 Homo sapiens hypothetical LOC339771 (LOC339771), mRNA XM 295062 Homo sapiens hypothetical LOC339782 (LOC339782), mRNA XM\_295091 Homo sapiens hypothetical LOC339875 (LOC339875), mRNA XM 295096 Homo sapiens hypothetical LOC339899 (LOC339899), mRNA XM 295097 Homo sapiens hypothetical LOC339902 (LOC339902), mRNA XM 295120 Homo sapiens hypothetical LOC339985 (LOC339985), mRNA XM 295126 Homo sapiens hypothetical LOC339997 (LOC339997), mRNA XM 295146 Homo sapiens hypothetical LOC340065 (LOC340065), mRNA XM\_295155 Homo sapiens hypothetical protein LOC340094 (LOC340094), mRNA XM\_295166 Homo sapiens hypothetical LOC340148 (LOC340148), mRNA XM\_295169 Homo saplens hypothetical LOC340149 (LOC340149), mRNA XM\_295178 Homo sapiens hypothetical LOC340171 (LOC340171), mRNA XM\_295195 Homo sapiens similar to Matn2-prov protein (LOC340267), mRNA XM 295200 Homo sapiens hypothetical LOC340286 (LOC340286), mRNA XM 295205 Homo saplens hypothetical LOC340349 (LOC340349), mRNA XM 295213 Homo sapiens hypothetical LOC340346 (LOC340346), mRNA XM 295252 Homo sapiens hypothetical LOC340450 (LOC340450), mRNA XM 295257 Homo sapiens hypothetical LOC340477 (LOC340477), mRNA XM 295261 Homo saplens hypothetical LOC340511 (LOC340511), mRNA XM 295263 Homo sapiens hypothetical protein LOC340508 (LOC340508), mRNA XM 295270 Homo sapiens hypothetical protein LOC340581 (LOC340581), mRNA XM\_295309 Homo sapiens similar to putative neuronal cell adhesion molecule (LOC3430 XM\_295598 Homo saplens hypothetical LOC343484 (LOC343484), mRNA XM\_295865 Homo sapiens similar to apical early endosomal glycoprotein precursor (LOC XM 296117 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM 296315 Homo sapiens similar to 60S ribosomal protein L35 (LOC341604), mRNA XM 296817 Homo sapiens similar to hypothetical protein DKFZp434P0316 (LOC342346) XM 297205 Homo sapiens hypothetical LOC342900 (LOC342900), mRNA XM 297687 Homo sapiens similar to transmembrane protein 16C; chromosome 11 open XM 297816 Homo sapiens similar to dJ824F16.3 (novel protein similar to mouse thrombo XM 298045 Homo sapiens hypothetical LOC347475 (LOC347475), mRNA XM 298053 Homo sapiens hypothetical LOC347487 (LOC347487), mRNA XM 298151 Homo sapiens hypothetical LOC344595 (LOC344595), mRNA XM\_298233 Homo sapiens similar to hypothetical protein FLJ38348 (LOC344709), mRNA XM\_301210 Homo sapiens similar to testis-specific protein NYD-TSP1 (LOC388775), mR XM 350780 Homo sapiens KIAA0592 protein (KIAA0592), mRNA XM 350880 Homo sapiens ras homolog gene family, member C like 1 (ARHCL1), mRNA

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XM 351335 Homo sapiens similar to hypothetical protein KIAA0454 - human (fragment) ( Homo sapiens similar to dJ309K20.1.1 (novel protein similar to dysferlin, isof XM 351366 XM 351473 Homo sapiens similar to GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE XM 351574 Homo sapiens similar to Succinate dehydrogenase [ubiquinone] flavoprotein XM 351617 Homo sapiens similar to dJ28l24.1.2 (Spinal Muscular Atrophy region (SMA3) XM 351723 Homo sapiens similar to tripartite motif protein TRIM50B (LOC375593), mRN XM\_351854 Homo sapiens similar to cDNA sequence BC034076 (LOC389797), mRNA XM\_351948 Homo sapiens similar to Transcript Y 7 protein (LOC389916), mRNA XM 352159 Homo sapiens similar to hypothetical protein LOC339047 (LOC388215), mRI XM 352463 Homo sapiens similar to myoferlin isoform b; fer-1-like 3 (LOC391408), mRN XM 352847 Homo sapiens hypothetical protein LOC340529 (LOC340529), mRNA XM\_353628 Homo sapiens similar to tripartite motif protein TRIM50B (LOC378125), mRN XM\_370532 Homo sapiens similar to ubiquitin-conjugating enzyme E2 variant 1 isoform a XM\_370533 Homo sapiens similar to eukaryotic initiation factor 4B (LOC387637), mRNA XM\_370534 Homo sapiens similar to RIKEN cDNA E130012A19 (LOC387640), mRNA XM\_370536 Homo sapiens similar to RIKEN cDNA 4921522E24 (LOC387642), mRNA XM\_370537 Homo sapiens similar to amyloid beta (A4) precursor protein-binding, family I XM\_370538 Homo sapiens similar to amylold beta (A4) precursor protein-binding, family I XM\_370541 Homo sapiens FLJ44037 protein (FLJ44037), mRNA XM 370542 Homo sapiens similar to supervillin isoform 2; membrane-associated F-actin XM 370543 Homo sapiens similar to Pre-B cell enhancing factor precursor (LOC387651) XM\_370545 Homo sapiens similar to bA291L22.2 (similar to CDC10 (cell division cycle 10 XM 370554 Homo sapiens similar to ARF GTPase-activating protein (LOC387671), mRN XM\_370555 Homo sapiens similar to Glutamate dehydrogenase, mitochondrial precursor XM\_370557 Homo sapiens similar to KIAA0592 protein (LOC387676), mRNA XM\_370560 Homo sapiens similar to ADP-ribosylation factor-like protein 4 (LOC387684), XM\_370562 Homo sapiens LOC399782 (LOC387688), mRNA XM 370564 Homo saplens similar to BMS1-like, ribosome assembly protein; ribosome bid XM\_370565 Homo sapiens similar to hypothetical protein FLJ20967 (LOC387694), mRN/ XM\_370566 Homo sapiens similar to RLLV1833 (LOC387695), mRNA XM 370567 Homo sapiens KIAA1975 protein similar to MRIP2 (KIAA1975), mRNA XM\_370569 Homo saplens similar to expressed sequence AW210596 (LOC387700), mR XM\_370570 Homo sapiens similar to hypothetical protein FLJ25224 (LOC387702), mRN/ XM\_370571 Homo sapiens similar to ATP-dependent DNA helicase II, 70 kDa subunit (Lu XM\_370573 Homo sapiens similar to KIAA1345 protein (LOC387707), mRNA XM\_370575 Homo sapiens hypothetical protein MGC11279 (MGC11279), mRNA XM 370577 Homo sapiens similar to RIKEN cDNA 6430537H07 gene (LOC387712), mR XM\_370580 Homo sapiens similar to Hmx2 protein (LOC387716), mRNA XM\_370582 Homo sapiens hypothetical gene supported by BC062717 (LOC387718), mR XM\_370584 Homo saplens hypothetical gene supported by AK127642 (LOC387720), mR XM 370585 Homo sapiens similar to bA442O18.2 (novel protein) (LOC387721), mRNA XM\_370586 Homo sapiens LOC399826 (LOC387723), mRNA XM\_370589 Homo sapiens similar to double homeobox protein (LOC387727), mRNA XM\_370591 Homo sapiens similar to hypothetical protein MGC5560 (LOC387728), mRN/ XM\_370593 Homo sapiens similar to double homeobox protein (LOC387729), mRNA XM\_370597 Homo sapiens similar to putative haemopoietic membrane protein (LOC3877 XM\_370603 Homo sapiens similar to SB153 protein (LOC387745), mRNA XM\_370605 Homo sapiens similar to seven transmembrane helix receptor (LOC387748), XM\_370606 Homo sapiens hypothetical gene supported by BX647806 (LOC387749), mR XM\_370607 Homo sapiens similar to SI:zC220F6.1 (novel protein similar to human dyneii XM\_370610 Homo sapiens similar to 60S nbosomal protein L23a (LOC387752), mRNA XM\_370611 Homo sapiens similar to 60S ribosomal protein L21 (LOC387753), mRNA XM\_370612 Homo saplens calcitonin-related polypeptide, beta (CALCB), mRNA XM\_370613 Homo saplens similar to RIKEN cDNA 3830422K02 (LOC387755), mRNA

XM\_370615 Homo sapiens hypothetical protein DKF2p686024166 (DKF2p686024166),
 XM\_370616 Homo sapiens hypothetical protein LOC338845 (LOC338645), mRNA
 XM\_370618 Homo sapiens hypothetical protein F1J20294 (F1J20294), mRNA

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XM 370619 Homo sapiens similar to mitochondrial carrier protein MGC4399 (LOC38776) XM 370621 Homo sapiens similar to tripartite motif protein 48: TRIM48 (LOC387770), mF XM 370622 Homo sapiens similar to seven transmembrane helix receptor (LOC387772), XM 370623 Homo sapiens similar to MGC15937 protein (LOC387773), mRNA XM 370629 Homo sapiens similar to organic anion transporter 6 (LOC387775), mRNA XM 370630 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 14B (PPF XM 370631 Homo sapiens similar to p33 ringo (LOC387778), mRNA XM 370632 Homo sapiens similar to phosphoglycerate mutase 1 (brain) (LOC387779), rr XM\_370633 Homo sapiens similar to solute carrier family 22 member 6; organic cationic t XM\_370634 Homo sapiens similar to UBIQUITIN-LIKE PROTEIN FUBI (LOC387781), mF XM 370635 Homo sapiens KIAA0280 protein (KIAA0280), mRNA XM\_370636 Homo sapiens similar to RIKEN cDNA 2610209A20 (LOC387787), mRNA XM 370638 Homo sapiens LOC399929 (LOC387790), mRNA XM 370639 Homo sapiens similar to Mitochondrial import receptor subunit TOM20 homol XM 370642 Homo sapiens LOC399932 (LOC387795), mRNA XM 370644 Homo sapiens similar to tripartite motif-containing 43 (LOC387800), mRNA XM 370648 Homo sapiens LOC399943 (LOC387804), mRNA XM 370649 Homo sapiens similar to ARP2/3 complex 21 kDa subunit (p21-ARC) (Actin-r XM 370651 Homo sapiens hypothetical protein FLJ32810 (FLJ32810), mRNA XM\_370652 Homo sapiens dynein, cytoplasmic, heavy polypeptide 2 (DNCH2), mRNA XM\_370653 Homo sapiens KIAA1826 protein (KIAA1826), mRNA XM\_370654 Homo sapiens KIAA1726 protein (KIAA1726), mRNA XM\_370657 Homo sapiens placenta expressed transcript 1 (PLET1), mRNA XM 370658 Homo saplens similar to hypothetical protein FLJ25224 (LOC387811), mRN/ XM 370660 Homo sapiens KIAA1201 protein (KIAA1201), mRNA XM 370661 Homo sapiens similar to seven transmembrane helix receptor (LOC387815). XM 370662 Homo sapiens olfactory receptor, family 8, subfamily G, member 2 (OR8G2), XM 370663 Homo saplens retinoblastoma inhibiting gene 1 (RBIG1), mRNA XM 370664 Homo saplens similar to hypothetical protein (LOC387816), mRNA XM\_370665 Homo sapiens similar to DnaJ (Hsp40) homolog, subfamily B, member 6 isof XM\_370666 Homo sapiens similar to hypothetical protein (LOC387822), mRNA XM\_370667 Homo sapiens KIAA1110 protein (KIAA1110), mRNA XM\_370668 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM 370669 Homo saplens homeobox C14 (LOC360030), mRNA XM 370672 Homo sapiens similar to hypothetical protein SB153 isoform 1 (LOC387830). XM 370674 Homo sapiens similar to helicase (LOC387832), mRNA XM 370675 Homo saplens similar to DKFZp434C0631 protein (LOC387834), mRNA XM 370678 Homo sapiens similar to INPE5792 (LOC387836), mRNA XM\_370681 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM 370682 Homo sapiens KIAA1467 protein (KIAA1467), mRNA XM 370684 Home saplens similar to Elegation factor 1-alpha 1 (EF-1-alpha-1) (Elegati XM 370685 Homo sapiens hypothetical protein LOC144363 (LOC144363), mRNA XM 370686 Homo sapiens similar to RIKEN cDNA 2210417D09 (LOC387849), mRNA XM 370687 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM 370688 Homo saplens similar to Adenylate kinase isoenzyme 4, mitochondrial (ATP-XM 370690 Homo sapiens AT rich interactive domain 2 (ARID, RFX-like) (ARID2), mRNA XM 370691 Homo sapiens similar to expressed sequence Al836003 (LOC387856), mRN XM 370692 Homo sapiens hypothetical protein LOC121006 (LOC121006), mRNA XM 370693 Homo sapiens POU domain, class 6, transcription factor 1 (POU6F1), mRNA XM 370695 Homo sapiens similar to K+ channel tetramerization protein (LOC387861), m XM\_370696 Homo sapiens hypothetical protein FLJ34236 (FLJ34236), mRNA XM 370697 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM 370699 Homo sapiens protein tyrosine phosphatase, receptor type, Q (PTPRQ), mRI XM 370702 Homo sapiens FYVE, RhoGEF and PH domain containing 6 (FGD6), mRNA XM 370704 Homo sapiens similar to 10 KD HEAT SHOCK PROTEIN, MITOCHONDRIAL

XM 370705 Homo sapiens LOC400067 (LOC387881), mRNA

XM 370707 Homo sapiens similar to hypothetical protein C130069F04 (LOC387890), mF

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XM\_370709 Homo sapiens LOC400085 (LOC387894), mRNA XM\_370710 Homo sapiens similar to protein 40kD (LOC387902), mRNA XM\_370711 Homo sapiens similar to hypothetical protein (LOC387904), mRNA XM\_370713 Homo sapiens similar to bA271B5.1 (similar to ribosomal protein S7) (LOC38 XM\_370714 Homo sapiens similar to Ferritin heavy chain (Ferritin H subunit) (LOC38790) XM\_370715 Homo sapiens similar to hypothetical protein MGC48915 (LOC387911), mRN XM\_370716 Homo sapiens similar to TPTE and PTEN homologous inositol lipid phosphal XM\_370718 Homo sapiens similar to WGAR9166 (LOC387914), mRNA XM 370721 Homo sapiens similar to bA251J8.3.1 (novel protein, isoform 1) (LOC387920 XM\_370722 Homo sapiens similar to RIKEN cDNA 8030451K01 (LOC387921), mRNA XM 370723 Homo sapiens similar to tubulin, beta 5 (LOC387922), mRNA XM 370724 Homo sapiens similar to ribosome associated membrane protein 4 (LOC387) XM\_370725 Homo sapiens similar to KIAA1612 protein (LOC387924), mRNA XM\_370726 Homo sapiens similar to BB049667 protein (LOC387927), mRNA XM\_370727 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM\_370728 Homo sapiens similar to heterogeneous nuclear ribonucleoprotein A3 (LOC3 XM\_370729 Homo sapiens similar to Fatty acid-binding protein, epidermal (E-FABP) (Psc XM\_370731 Homo sapiens similar to expressed sequence AW121567 (LOC387944), mR XM\_370732 Homo sapiens similar to expressed sequence AW121567 (LOC387945), mR XM\_370733 Homo saplens LOC400166 (LOC387949), mRNA XM\_370734 Homo sapiens hypothetical gene supported by BC034570 (LOC387952), mR XM\_370737 Homo sapiens hypothetical protein FLJ10357 (FLJ10357), mRNA XM 370738 Homo sapiens helicase with SNF2 domain 1 (HELSNF1), mRNA XM\_370754 Homo sapiens thiamine triphosphatase (THTPA), mRNA XM\_370756 Homo saplens KIAA1305 (KIAA1305), mRNA XM\_370758 Homo saplens hypothetical gene supported by BX248251 (LOC387978), mR XM\_370759 Homo sapiens similar to RIKEN cDNA D930036F22 gene (LOC387979), mR XM\_370760 Homo sapiens similar to 60S RIBOSOMAL PROTEIN L12 (LOC387982), mR XM\_370762 Homo sapiens similar to TIMM9 (LOC387990), mRNA XM\_370763 Homo sapiens similar to ribosomal protein L31 (LOC387991), mRNA XM\_370765 Homo sapiens papilin, proteoglycan-like sulfated glycoprotein (PAPLN), mRN XM\_370767 Homo sapiens chromosome 14 open reading frame 46 (C14orf46), mRNA XM\_370768 Homo sapiens similar to Acylphosphatase, organ-common type isozyme (Ac XM 370769 Homo sapiens hypothetical protein LOC161394 (LOC161394), mRNA XM\_370772 Homo sapiens similar to protease inhibitor (LOC388007), mRNA XM\_370776 Homo sapiens similar to RTI1 (LOC388015), mRNA XM\_370777 Homo sapiens Similar to Lysophospholipase (LOC374569), mRNA XM\_370778 Homo sapiens similar to expressed sequence Al839735 (LOC388021), mRN XM\_370779 Homo sapiens hypothetical gene supported by AK131040 (LOC388022), mR XM\_370781 Homo sapiens similar to Ig alpha-2 chain C region (LOC388025), mRNA XM\_370782 Homo sapiens similar to Ig epsilon chain C region (LOC388026), mRNA XM 370785 Homo saplens chromosome 14 open reading frame 81 (C14orf81), mRNA XM 370826 Homo sapiens similar to breast cancer antigen NY-BR-1 (LOC388065), mRN XM 370829 Homo sapiens similar to camitine deficiency-associated gene expressed in v XM\_370830 Homo sapiens similar to breast cancer anti-estrogen resistance 1; Crk-assoc XM\_370831 Homo saplens similar to Ribosome biogenesis protein BMS1 homolog (LOC; XM\_370832 Homo sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC: XM\_370833 Homo sapiens similar to 40S ribosomal protein S8 (LOC388076), mRNA XM\_370834 Homo sapiens similar to immunoglobulin heavy chain variable region (LOC3) XM\_370835 Homo sapiens similar to FLJ27099 protein (LOC388078), mRNA XM 370836 Homo sapiens similar to ZCCHC2 protein (LOC388079), mRNA XM 370837 Homo sapiens similar to hypothetical protein (LOC388080), mRNA XM\_370838 Homo sapiens hypothetical protein LOC339005 (LOC339005), mRNA XM 370839 Homo sapiens similar to golgin-67 isoform b (LOC388084), mRNA XM\_370840 Homo sapiens similar to hypothetical protein (LOC388085), mRNA XM\_370843 Homo sapiens similar to hypothetical protein (LOC388092), mRNA

XM\_370844 Homo sapiens similar to hypothetical protein (LOC388094), mRNA

XM 370845 Homo sapiens similar to hyperpolarization activated cyclic nucleotide-gated p XM 370846 Homo sapiens similar to hypothetical protein FLJ35785 (LOC388098), mRN/ XM 370848 Homo sapiens similar to chromosome 1 open reading frame 37 (LOC388104 XM 370849 Homo sapiens similar to hyperpolarization activated cyclic nucleotide-gated p XM 370851 Home sapiens similar to hypothetical protein FLJ35785 (LOC388109), mRN/ XM 370852 Homo sapiens similar to 4930563P21Rik protein (LOC388110), mRNA XM 370853 Homo sapiens similar to Nanog homeobox; homeobox transcription factor Na XM\_370855 Homo sapiens similar to RIKEN cDNA 2600011L02 (LOC388115), mRNA XM 370856 Homo sapiens similar to RIKEN cDNA 6720467C03 (LOC388116), mRNA XM 370858 Homo sapiens similar to kinesin-like protein (LOC388118), mRNA XM 370863 Homo sapiens ATPase, Class I, type 8B, member 4 (ATP8B4), mRNA XM 370864 Homo sapiens similar to TNF-induced protein (LOC388121), mRNA XM 370865 Homo sapiens similar to Laminin receptor 1 (LOC388122), mRNA XM 370866 Homo sapiens hypothetical protein FLJ25756 (FLJ25756), mRNA XM\_370867 Homo sapiens hypothetical protein FLJ20086 (FLJ20086), mRNA XM 370868 Homo sapiens similar to hypothetical LOC237397 (LOC388125), mRNA XM 370871 Homo sapiens hypothetical protein LOC145837 (LOC145837), mRNA XM 370872 Homo sapiens similar to 60S ribosomal protein L17 (L23) (LOC388132), mRI XM 370873 Homo sapiens similar to RIKEN cDNA 6030419C18 gene (LOC388135), mR XM\_370876 Homo sapiens similar to Golgi autoantigen, golgin subfamily A member 6 (Go XM\_370878 Homo sapiens KIAA2002 protein (KIAA2002), mRNA XM\_370879 Homo sapiens similar to 60S ribosomal protein L21 (LOC388143), mRNA XM 370880 Homo sapiens mesoderm development candidate 2 (MESDC2), mRNA XM 370881 Homo sapiens similar to FLJ40113 protein (LOC388146), mRNA XM 370882 Homo sapiens similar to ribosomal protein L9; 60S ribosomal protein L9 (LO XM 370883 Homo sapiens LOC400417 (LOC388148), mRNA XM 370886 Homo sapiens similar to FLJ40113 protein (LOC388151), mRNA XM 370887 Homo sapiens LOC400422 (LOC388153), mRNA XM 370893 Homo sapiens similar to hypothetical protein FLJ13119 (LOC388159), mRN/ XM 370894 Homo sapiens LOC400427 (LOC388160), mRNA XM\_370895 Homo sapiens LOC400432 (LOC388163), mRNA XM\_370897 Homo sapiens similar to RIKEN cDNA 3010021M21 (LOC388165), mRNA XM\_370898 Homo sapiens similar to FLJ40113 protein (LOC388166), mRNA XM 370899 Homo sapiens similar to FLJ40113 protein (LOC388167), mRNA XM\_370904 Homo sapiens similar to hypothetical protein 4921538O11 (LOC388173), mF XM\_370905 Homo sapiens similar to Golgi autoantigen, golgin subfamily a, 2; golgin-95; XM\_370906 Homo sapiens similar to hypothetical protein FLJ20147 (LOC388175), mRN/ XM 370908 Homo sapiens similar to cyclin-E binding protein 1 (H. sapiens) (MGC14386) XM 370909 Homo sapiens similar to H2A histone family, member V isoform 2; histone H; XM 370910 Homo sapiens similar to KIAA0974 protein (LOC388181), mRNA XM 370911 Homo sapiens hypothetical gene supported by AK124283 (LOC388182), mR XM\_370917 Homo sapiens similar to hypothetical protein (LOC388189), mRNA XM\_370918 Homo sapiens hypothetical protein DKFZp434P162 (DKFZp434P162), mRN. XM 370924 Homo sapiens LOC400486 (LOC388199), mRNA XM\_370925 Homo sapiens hypothetical protein LOC283951 (LOC283951), mRNA XM\_370926 Homo sapiens similar to KIAA0445 protein (LOC388202), mRNA XM 370927 Homo sapiens ring finger protein 151 (RNF151), mRNA XM 370928 Homo sapiens KIAA1171 protein (KIAA1171), mRNA XM 370930 Homo sapiens similar to RIKEN cDNA 1520401A03 gene (LOC388205), mRI XM 370931 Homo sapiens olfactory receptor, family 1, subfamily F, member 2 (OR1F2), XM\_370932 Homo sapiens hypothetical protein FLJ39639 (FLJ39639), mRNA XM 370934 Homo sapiens similar to CG15828-PA (LOC388210), mRNA XM 370935 Homo sapiens LOC400498 (LOC388211), mRNA XM 370938 Homo sapiens similar to QRWT5810 (LOC388218), mRNA XM 370939 Homo sapiens similar to KIAA0220 (LOC388221), mRNA XM 370942 Homo sapiens similar to carbonic anhydrase VA, mitochondrial precursor; ca

XM 370943 Homo sapiens similar to MGC9515 protein (LOC400510), mRNA

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XM 370944 Homo sapiens hypothetical protein LOC146177 (LOC146177), mRNA XM\_370946 Homo sapiens similar to protein kinase/ribonuclease IRE1 beta (LOC388226 XM\_370947 Homo sapiens ER to nucleus signalling 2 (ERN2), mRNA XM 370948 Homo sapiens similar to SH3-binding kinase (LOC388228), mRNA XM 370949 Homo sapiens similar to Group X secretory phospholipase A2 precursor (Pho XM 370952 Homo sapiens similar to MGC9515 protein (LOC388233), mRNA XM\_370958 Homo sapiens similar to nuclear pore complex interacting protein (LOC3882: XM 370959 Homo sapiens similar to RRN3 (LOC388238), mRNA XM\_370965 Homo sapiens similar to hypothetical protein BC011981 (LOC388242), mRN. XM 370966 Homo sapiens similar to carbonic anhydrase VA, mitochondrial precursor; ca XM 370967 Homo sapiens hypothetical protein LOC124411 (LOC124411), mRNA XM 370968 Homo sapiens similar to KIAA1501 protein (LOC388248), mRNA XM 370972 Homo sapiens similar to Adrenoleukodystrophy protein (ALDP) (LOC388253 XM 370973 Homo sapiens similar to KIAA1501 protein (LOC388255), mRNA XM\_370974 Homo sapiens similar to NY-REN-7 antigen (LOC388258), mRNA XM\_370975 Homo sapiens similar to protein kinase related to Raf protein kinases; Metho XM\_370977 Homo sapiens similar to Immunoglobulin heavy chain VH3 (LOC388264), mF XM\_370980 Homo sapiens similar to RAB41 (LOC388271), mRNA XM 370981 Homo sapiens similar to RIKEN cDNA 4921524J17 (LOC388272), mRNA XM 370982 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM 370984 Homo saplens LOC388284 (LOC388284), mRNA XM 370986 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC38 XM 370987 Homo sapiens LOC388289 (LOC388289), mRNA XM 370988 Homo sapiens similar to protein 40kD (LOC388290), mRNA XM 370991 Home sapiens similar to hypothetical protein - fruit fly (Drosophila melanogas XM\_370992 Homo saplens LOC388298 (LOC388298), mRNA XM 370993 Homo sapiens similar to coenzyme A diphosphatase (LOC388299), mRNA XM 370995 Homo sapiens snail homolog 3 (Drosophila) (SNAI3), mRNA XM 370997 Homo sapiens similar to Brain-type organic cation transporter (Solute carrier XM 371001 Homo saplens LOC388317 (LOC388317), mRNA XM 371006 Homo sapiens similar to RIKEN cDNA C730027E14 (LOC388323), mRNA XM 371008 Homo sapiens similar to Death effector filament-forming Ced-4-like apoptosis XM 371009 Homo sapiens LOC388327 (LOC388327), mRNA XM 371010 Homo sapiens hypothetical protein MGC49942 (MGC49942), mRNA XM 371012 Homo sapiens similar to ENSANGP00000015193 (LOC388329), mRNA XM\_371013 Homo sapiens similar to Gag-Pro-Pol protein (LOC388332), mRNA XM 371014 Homo sapiens similar to Williams Beuren syndrome chromosome region 19 ( XM 371015 Homo sapiens ubiquitin specific protease 43 (USP43), mRNA XM 371016 Homo sapiens similar to RIKEN cDNA A730055C05 gene (LOC388335), mR XM 371017 Homo sapiens similar to hypothetical protein D430041B17 (LOC388336), mF XM 371018 Homo sapiens similar to CDRT15 protein (LOC388337), mRNA XM 371019 Homo saplens similar to ribosomal protein (LOC388339), mRNA XM 371020 Homo sapiens LOC388341 (LOC388341), mRNA XM\_371023 Homo sapiens similar to ribosomal protein L13; 60S ribosomal protein L13; b XM\_371024 Homo sapiens similar to poly(A) binding protein interacting protein 1 isoform XM\_371026 Homo sapiens similar to hypothetical protein FLJ10847 (LOC388351), mRN/ XM 371028 Home sapiens similar to AF038169 protein (LOC388353), mRNA XM 371032 Homo sapiens similar to bB329D4.2.1 (novel protein similar to a truncated nu XM 371034 Homo sapiens similar to PDZ and LIM domain 1 (elfin); carboxy terminal LIM XM 371035 Homo sapiens similar to 40S ribosomal protein S7 (S8) (LOC388363), mRN/ XM 371036 Homo sapiens KIAA0100 gene product (KIAA0100), mRNA XM 371039 Homo sapiens hypothetical protein MGC19764 (MGC19764), mRNA XM\_371043 Homo sapiens similar to TBC1 domain family member 3 (Rab GTPase-active XM 371046 Homo sapiens similar to TBC1 domain family member 3 (Rab GTPase-active XM 371052 Homo sapiens Nck, Ash and phospholipase C binding protein (NAP4), mRN/

XM\_371053 Homo sapiens LOC388381 (LOC388381), mRNA
XM\_371054 Homo sapiens LOC388382 (LOC388382), mRNA

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XM\_371056 Homo sapiens similar to RIKEN cDNA 4933439F11 (LOC388389), mRNA XM\_371057 Homo sapiens hypothetical protein LOC201175 (LOC201175), mRNA XM\_371058 Homo sapiens similar to KIAA0563 gene product (LOC388391), mRNA XM\_371059 Homo sapiens similar to FALZ protein (LOC388392), mRNA XM\_371062 Homo sapiens similar to Hypothetical protein KIAA0563 (LOC388395), mRN, XM 371063 Homo sapiens similar to KIAA0563 gene product (LOC388396), mRNA XM 371066 Homo sapiens similar to SMT3 suppressor of mif two 3 homolog 2 (LOC3883) XM\_371067 Homo sapiens similar to Eukaryotic translation initiation factor 4E (eIF4E) (eI XM\_371068 Homo sapiens similar to ribosomal protein L7 (LOC388401), mRNA XM\_371069 Homo sapiens similar to 40S ribosomal protein S2 (LOC388402), mRNA XM 371070 Homo sapiens similar to Yippee-like protein 2 (DiGeorge syndrome-related p XM 371074 Homo sapiens putative ankyrin-repeat containing protein (DKFZP564D166). XM 371077 Homo sapiens similar to PP905 (LOC388413), mRNA XM\_371078 Homo sapiens similar to galectin 3 binding protein; L3 antigen; Mac-2-binding XM\_371079 Homo sapiens Fas binding protein 1 (FBF-1), mRNA XM\_371081 Homo sapiens LOC388424 (LOC388424), mRNA XM\_371082 Homo sapiens hypothetical protein FLJ20753 (FLJ20753), mRNA XM 371083 Homo sapiens LOC388428 (LOC388428), mRNA XM 371084 Homo sapiens KIAA1447 protein (KIAA1447), mRNA XM 371085 Homo sapiens hypothetical protein LOC339229 (LOC339229), mRNA XM 371086 Homo sapiens similar to dysferlin-interacting protein 1 (LOC388432), mRNA XM\_371088 Homo sapiens similar to hypothetical protein DKFZp434F142 (LOC388437). XM 371089 Homo sapiens similar to MEGF11 protein (LOC388438), mRNA XM\_371092 Homo saplens similar to cytokine (LOC388440), mRNA XM\_371097 Homo saplens LOC388444 (LOC388444), mRNA XM\_371098 Homo sapiens hypothetical protein LOC348262 (LOC348262), mRNA XM 371105 Homo sapiens LOC388457 (LOC388457), mRNA XM 371106 Homo sapiens LOC388458 (LOC388458), mRNA XM\_371107 Homo sapiens similar to 60S ribosomal protein L6 (TAX-responsive enhance XM 371108 Homo sapiens similar to KIAA1314 protein (LOC388462), mRNA XM\_371109 Homo sapiens hypothetical protein LOC284221 (LOC284221), mRNA XM 371110 Homo sapiens similar to acyl-malonyl condensing enzyme (LOC388463), mF XM\_371111 Homo sapiens similar to breast cancer antigen NY-BR-1.1 (LOC388469), mF XM\_371113 Homo sapiens similar to 60S RIBOSOMAL PROTEIN L21 (LOC388471), mR XM\_371114 Homo sapiens formin homology 2 domain containing 3 (FHOD3), mRNA XM\_371115 Homo saplens similar to 60S ribosomal protein L7a (Surfeit locus protein 3) ( XM\_371116 Homo sapiens myosin VB (MYO5B), mRNA XM\_371117 Homo sapiens similar to Nonhistone chromosomal protein HMG-14 (High-mc XM\_371118 Homo sapiens similar to serologically defined colon cancer antigen 3 (LOC3) XM\_371120 Homo sapiens thioredoxin-like 4 (TXNL4), mRNA XM\_371121 Homo saplens similar to bA476I15.3 (novel protein similar to septin) (LOC38) XM 371122 Homo sapiens similar to Dip1-associated protein C (LOC388488), mRNA XM 371125 Homo sapiens similar to KIAA1683 protein (LOC388491), mRNA XM\_371130 Homo saplens similar to methyl-CpG binding domain protein 3-like 2 (LOC38) XM\_371132 Homo sapiens FLJ38144 protein (FLJ38144), mRNA XM 371134 Homo saniens similar to complement C3-Q2 (LOC388503), mRNA XM\_371138 Homo sapiens hypothetical protein LOC284390 (LOC284390), mRNA XM\_371139 Homo sapiens hypothetical protein FLJ14959 (FLJ14959), mRNA XM\_371140 Homo sapiens similar to zinc finger protein 433 (LOC388507), mRNA XM\_371141 Homo sapiens similar to ribosomal protein L17 (LOC388508), mRNA XM 371142 Homo sapiens similar to hypothetical protein FLJ38281 (LOC388509), mRN/ XM 371143 Homo sapiens similar to Asialoglycoprotein receptor 2 (Hepatic lectin H2) (At XM 371145 Homo sapiens similar to Cytochrome P450 4F12 (CYPIVF12) (LOC388514). XM 371146 Homo sapiens KIAA1683 (KIAA1683), mRNA XM\_371147 Homo sapiens similar to MOST-1 protein (LOC388517), mRNA XM\_371150 Homo sapiens zinc finger protein 90 (HTF9) (ZNF90), mRNA

XM 371151 Homo sapiens similar to 40S ribosomal protein S16 (LOC388519), mRNA

XM 371152 Homo sapiens zinc finger protein 486 (ZNF486). mRNA XM 371153 Homo sapiens similar to hypothetical protein (LOC388521), mRNA XM\_371154 Homo sapiens similar to Zinc finger protein 429 (LOC388522), mRNA XM\_371155 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM\_371157 Homo sapiens similar to CG14939-PA (LOC388526), mRNA XM\_371158 Homo sapiens hypothetical protein LOC147991 (LOC147991), mRNA XM\_371159 Homo sapiens similar to regulator of G protein signaling 9-binding protein; Rt XM 371160 Homo sapiens similar to 60S ribosomal protein L21 (LOC388532), mRNA XM 371161 Homo sapiens similar to KIPV467 (LOC388533), mRNA XM 371164 Homo sapiens NYD-SP11 protein (NYD-SP11), mRNA XM 371165 Homo sapiens similar to SPRED-3 (LOC388538), mRNA XM 371167 Homo sapiens syncollin (SYCN), mRNA XM 371170 Homo sapiens similar to Zinc finger protein 216 (LOC388545), mRNA XM\_371174 Homo sapiens zinc finger protein 283 (ZNF283), mRNA XM\_371175 Homo sapiens zinc finger protein 229 (ZNF229), mRNA XM\_371176 Homo sapiens similar to CEACAM5 protein (LOC388550), mRNA XM\_371177 Homo sapiens similar to carcinoembryonic antigen-related cell adhesion mol-XM 3.71178 Homo sapiens similar to BC043666 protein (LOC388552), mRNA XM 3.71179 Homo sapiens F-box only protein 34-like (FBXO34L), mRNA XM\_371181 Homo sapiens nanos homolog 2 (Drosophila) (NANOS2), mRNA XM 371182 Homo sapiens similar to BC282485\_1 (LOC388554), mRNA XM 371183 Homo sapiens similar to RPRC483 (LOC388555), mRNA XM\_371184 Homo sapiens KIAA1183 protein (KIAA1183), mRNA XM\_371187 Homo sapiens hypothetical gene MGC45922 (MGC45922), mRNA XM\_371190 Homo sapiens hypothetical protein LOC162967 (LOC162967), mRNA XM\_3 71191 Homo sapiens similar to RIKEN cDNA 1300007C21 (LOC388560), mRNA XM 3.71192 Homo saplens similar to KIAA2033 protein (LOC388561), mRNA XM\_3 71195 Homo sapiens hypothetical protein MGC35045 (MGC35045), mRNA XM 371196 Homo sapiens LOC388564 (LOC388564), mRNA XM 371197 Homo sapiens similar to zinc finger protein 111 (LOC388565), mRNA XM 371198 Homo sapiens similar to Zinc finger protein 471 (EZFIT-related protein 1) (LC XM 371200 Homo sapiens similar to R30217\_1 (LOC388567), mRNA XM 371201 Homo sapiens similar to Zinc finger protein 324 (Zinc finger protein ZF5128) XM\_371202 Homo sapiens CXYorf1-related protein (FLJ00038), mRNA XM\_371204 Homo saplens similar to 60S ribosomal protein L23a (LOC388574), mRNA XM\_371205 Homo sapiens similar to hypothetical protein DKFZp434F142 (LOC388576), XM\_371206 Homo sapiens similar to F-box only protein 25 (LOC388578), mRNA XM\_371207 Homo sapiens similar to beta-tubulin 4Q (LOC388579), mRNA XM\_3 71208 Homo sapiens similar to RIKEN cDNA 1110035L05 (LOC388581), mRNA XM\_371210 Homo sapiens taste receptor, type 1, member 3 (TAS1R3), mRNA XM\_371214 Homo sapiens KIAA0450 gene product (KIAA0450), mRNA XM 371215 Homo sapiens similar to hairy and enhancer of split 5 (LOC388585), mRNA XM 371216 Homo saplens LOC388591 (LOC388591), mRNA XM\_371221 Homo sapiens similar to WD repeat domain 9 isoform A; WD repeat domain XM\_371222 Homo saplens similar to Hypothetical protein MGC37938 (LOC388595), mR/ XM\_371223 Homo sapiens similar to 40S ribosomal protein S16 (LOC388596), mRNA XM\_371225 Homo sapiens hypothetical protein LOC284729 (LOC284729), mRNA XM 371227 Homo sapiens ciliary rootlet coiled-coil, rootletin (CROCC), mRNA XM\_371230 Homo sapiens similar to heparan-sulfate 6-sulfotransferase (LOC388605), m XM\_371232 Homo sapiens similar to Succinate dehydrogenase [ubiquinone] cytochrome XM\_371234 Homo saplens similar to RhCE protein (LOC388607), mRNA XM\_371235 Homo sapiens similar to mutant membrane protein RhCe (LOC388608), mRI XM\_371236 Homo sapiens hypothetical protein FLJ10747 (FLJ10747), mRNA XM\_371237 Homo sapiens cation channel, sperm associated 4 (CATSPER4), mRNA XM\_371238 Homo sapiens LOC388610 (LOC388610), mRNA XM\_371239 Homo sapiens similar to EAPG6122 (LOC388611), mRNA

XM 371241 Homo sapiens similar to RIKEN cDNA 9330177P20 (LOC388618), mRNA

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XM 371243 Homo sapiens similar to 60S ribosomal protein L21 (LOC388621), mRNA XM 371244 Homo sapiens LOC388624 (LOC388624), mRNA XM 371245 Homo sapiens similar to FLJ00408 protein (LOC388625), mRNA XM 371246 Homo sapiens hypothetical protein FLJ21156 (FLJ21156), mRNA XM 371248 Homo sapiens LOC374973 (LOC374973), mRNA XM\_371249 Homo sapiens similar to cytochrome P450 4Z1 (LOC388629). mRNA XM 371250 Homo sapiens LOC388630 (LOC388630), mRNA XM 371252 Homo sapiens similar to heterogeneous nuclear ribonucleoprotein A3 (LOC3 XM 371253 Homo sapiens similar to Low-density lipoprotein receptor-related protein 2 pr XM 371254 Homo sapiens similar to Ubiquitin carboxyl-terminal hydrolase 24 (Ubiquitin t XM 371257 Homo sapiens KIAA1799 protein (KIAA1799), mRNA XM 371258 Homo sapiens hypothetical protein FLJ10770 (KIAA1579), mRNA XM 371259 Homo sapiens hypothetical protein DKFZp547l048 (DKFZp547l048), mRNA XM 371260 Homo sapiens similar to crystallin, zeta; NADPH:quinone reductase (LOC38) XM\_371261 Homo sapiens similar to Triosephosphate Isomerase (TIM) (LOC388642), ml XM 371262 Homo sapiens EGF, latrophilin and seven transmembrane domain containing XM\_371263 Homo sapiens mucolipin 2 (MCOLN2), mRNA XM\_371265 Homo sapiens similar to Guanylate binding protein 4 (LOC388646), mRNA XM\_371267 Homo sapiens hypothetical protein LOC164045 (LOC164045), mRNA XM 371268 Homo sapiens similar to 1700028K03 protein (LOC388649), mRNA XM 371269 Homo sapiens similar to RIKEN cDNA 2900024C23 (LOC388650), mRNA XM 371273 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM 371276 Homo sapiens similar to hypothetical protein MGC8902 (LOC388658), mRN/ XM\_371277 Homo saplens similar to RIKEN cDNA C230093N12 (LOC388659), mRNA XM 371278 Homo sapiens similar to mitsugumin29 (LOC388660), mRNA XM\_371279 Homo saplens amphoterin-induced gene (KIAA1163), mRNA XM\_371280 Homo sapiens similar to Orphan sodium- and chloride-dependent neurotrans XM\_371281 Homo saplens similar to DKFZP564K247 protein (LOC388665), mRNA XM\_371283 Homo saplens LOC388666 (LOC388666), mRNA XM 371284 Homo sapiens T-box 15 (TBX15), mRNA XM 371285 Homo sapiens 3-beta-hydroxysteroid dehydrogenase, tissue-type heart (LOC XM 371286 Homo saplens hypothetical protein MGC45731 (MGC45731), mRNA XM 371288 Homo sapiens similar to cyclophilin-LC; cyclophilin homolog overexpressed I XM\_371291 Homo sapiens similar to hypothetical protein FLJ21308 (LOC388673), mRN/ XM\_371292 Homo sapiens LOC388674 (LOC388674), mRNA XM 371299 Homo sapiens similar to KIAA0454 protein (LOC388681), mRNA XM 371301 Homo sapiens similar to hypothetical protein FLJ21308 (LOC388685), mRN/ XM\_371302 Homo sapiens similar to cyclophilin-LC; cyclophilin homolog overexpressed i XM 371304 Homo sapiens similar to cyclophilin-LC; cyclophilin homolog overexpressed i XM\_371305 Homo sapiens similar to hypothetical protein KIAA0454 - human (fragment) ( XM 371306 Homo sapiens similar to KIAA0454 protein (LOC388689), mRNA XM\_371310 Homo sapiens similar to hypothetical protein SB145 (LOC388695), mRNA XM 371311 Homo sapiens hypothetical protein FLJ36032 (FLJ36032), mRNA XM 371312 Homo sapiens hypothetical protein FLJ39117 (FLJ39117), mRNA XM 371313 Homo sapiens similar to dJ14N1.2 (novel S-100/ICaBP type calcium binding XM\_371314 Homo sapiens similar to skin-specific protein (LOC388699), mRNA XM\_371315 Homo sapiens LOC388701 (LOC388701), mRNA XM\_371316 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM\_371320 Homo sapiens FLJ00193 protein (FLJ00193), mRNA XM 371326 Homo sapiens similar to Putative dimethylaniline monooxygenase [N-oxide for XM\_371328 Homo sapiens hypothetical gene supported by BC007071 (dJ383J4.3), mRN XM\_371329 Homo sapiens similar to Protein translation factor SUI1 homolog (Sui1iso1) ( XM 371330 Homo sapiens similar to bA92K2.2 (similar to ubiquitin) (LOC388720), mRNA XM 371331 Homo sapiens similar to Hypothetical protein CBG13135 (LOC388722), mRN XM\_371332 Homo sapiens kinesin family member 21B (KIF21B), mRNA XM 371333 Homo sapiens similar to hypothetical protein FLJ37794 (LOC388724), mRN/.

XM 371334 Homo sapiens similar to mKIAA1151 protein (LOC388725), mRNA

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XM 371466

XM 371335 Homo sapiens similar to osteotesticular protein tyrosine phosphatase (LOC3: XM 371336 Homo sapiens similar to alpha tubulin (LOC388728), mRNA XM 371338 Homo sapiens hypothetical protein LOC93273 (LOC93273), mRNA XM 371339 Homo sapiens similar to 40S ribosomal protein S25 (LOC388733), mRNA XM 371340 Homo sapiens similar to Px19-like protein (25 kDa protein of relevant evolution XM 371343 Homo sapiens similar to KIAA0663 protein (LOC388739), mRNA XM 371344 Homo sapiens similar to calpain 8 (LOC388743), mRNA Homo sapiens hypothetical protein LOC347813 (LOC347813), mRNA XM 371346 XM 371350 Homo sapiens similar to RIKEN cDNA 1810063B05 (LOC388753), mRNA XM 371351 Homo sapiens similar to 60S ribosomal protein L35 (LOC388754), mRNA XM\_371352 Homo sapiens formin 2 (FMN2), mRNA XM 371353 Homo sapiens LOC388756 (LOC388756), mRNA XM\_371354 Homo sapiens hypothetical protein FLJ10157 (FLJ10157), mRNA XM 371355 Homo sapiens LOC388759 (LOC388759), mRNA XM 371356 Homo sapiens similar to olfactory receptor GA\_x6K02T2NHDJ-9721756-972 XM 371357 Homo sapiens similar to Olfactory receptor 2M6 (LOC388762), mRNA Homo sapiens olfactory receptor, family 2, subfamily M, member 4 (OR2M4), XM 371358 XM 371359 Homo sapiens similar to Ankrd3-prov protein (LOC388763), mRNA XM 371369 Homo sapiens C219-reactive peptide (FLJ39207), mRNA XM 371374 Homo sapiens similar to hypothetical protein (LOC388774), mRNA XM 371380 Homo sapiens S100 calcium binding protein A13 (S100A13), mRNA XM\_371384 Homo sapiens similar to AG02 (LOC388776), mRNA XM 371385 Homo sapiens similar to hypothetical protein DJ328E19.C1.1 (LOC388777), XM 371388 Homo saplens DKFZp434D177-like (DKFZp434D177-like), mRNA XM 371390 Homo sapiens similar to hypothetical protein (LOC388783), mRNA XM\_371391 Homo sapiens similar to dJ680N4.2 (ubiquitin-conjugating enzyme E2D 3 (ho XM\_371395 Homo sapiens similar to dJ1093G12.6 (A novel protein) (LOC388794), mRN/ XM 371397 Homo sapiens similar to hypothetical protein FLJ33620 (LOC388795), mRN/ XM 371398 Homo saplens myosin, heavy polypeptide 7B, cardiac muscle, beta (MYH7B) Homo sapiens chromosome 20 open reading frame 142 (C20orf142), mRNA XM 371399 XM 371401 Homo sapiens chromosome 20 open reading frame 106 (C20orf106), mRNA XM 371402 Home sapiens similar to dJ1153D9.4 (novel protein) (LOC388799), mRNA XM 371403 Homo sapiens LOC388802 (LOC388802), mRNA XM\_371405 Homo sapiens similar to bA476l15.3 (novel protein similar to septin) (LOC38) XM\_371407 Homo saplens similar to Ankyrin repeat domain protein 18A (LOC388812), rr XM\_371409 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC3886 XM 371411 Homo sapiens similar to GNGT1 protein (LOC388819), mRNA XM\_371413 Homo sapiens similar to Protein CGI-27 (C21orf19-like protein) (LOC388822 XM\_371416 Homo sapiens similar to C21orf258 (LOC388828), mRNA XM 371417 Homo sapiens KIAA0179 (KIAA0179), mRNA XM 371418 Homo saplens similar to PRED59 (LOC388830), mRNA XM 371421 Homo sapiens similar to hypothetical protein (LOC388840), mRNA XM\_371423 Homo sapiens similar to hypothetical protein DKFZp434P211.1 - human (frag XM\_371424 Homo saplens similar to breakpoint cluster region isoform 1 (LOC388847), rr Homo sapiens similar to hypothetical protein (LOC388852), mRNA XM 371429 Homo sapiens similar to sushi domain containing 2; Sushi domain (SCR repe XM 371430 XM 371431 Homo sapiens similar to Gamma-glutamyltranspeptidase 1 precursor (Gamm Homo sapiens similar to E2F transcription factor 6 isoform a (LOC388861), n XM 371436 Homo sapiens similar to dJ831C21.3 (novel protein similar to DKFZP434P21 XM 371437 XM 371455 Homo sapiens LOC388882 (LOC388882), mRNA Homo sapiens hypothetical protein MGC1842 (MGC1842), mRNA XM 371459 XM\_371460 Homo sapiens LOC388886 (LOC388886), mRNA XM 371461 Homo sapiens KIAA1671 protein (KIAA1671), mRNA Homo sapiens similar to hypothetical protein 4930562D19 (LOC388891), mF XM 371463

Homo sapiens LOC388900 (LOC388900), mRNA XM\_371468 Homo sapiens hypothetical protein MGC40042 (MGC40042). mRNA XM 371469 Homo sapiens LOC388906 (LOC388906), mRNA

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XM 371470 Homo sapiens similar to ribosomal protein L5: 60S ribosomal protein L5 (LO) XM 371471 Homo sapiens chromosome 22 open reading frame 1 (C22orf1), mRNA XM 371474 Homo sapiens plexin B2 (PLXNB2), mRNA XM\_371476 Homo sapiens similar to Doublecortin domain-containing protein 2 (RU2S pro XM\_371477 Homo sapiens similar to RIKEN cDNA 5830483C08 gene (LOC388926), mR XM\_371478 Homo sapiens LOC388927 (LOC388927), mRNA XM\_371479 Homo sapiens LOC388928 (LOC388928), mRNA XM\_371480 Homo sapiens similar to tudor domain containing 6 protein (LOC388929), mF XM 371481 Homo sapiens LOC388931 (LOC388931), mRNA XM 371484 Homo sapiens selenoprotein I, 1 (KIAA1724), mRNA XM\_371485 Homo sapiens similar to RIKEN cDNA 1700001C02 (LOC388936), mRNA XM 371486 Homo sapiens similar to phospholipase B (LOC388937), mRNA XM 371487 Homo sapiens phospholipase B1 (PLB1), mRNA XM 371488 Homo sapiens similar to CDNA sequence BC027072 (LOC388939), mRNA XM\_371489 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC38 XM\_371490 Homo sapiens similar to cysteine and histidine-rich domain (CHORD)-contain XM\_371491 Homo sapiens LOC388946 (LOC388946), mRNA XM\_371492 Homo sapiens similar to signal-transducing adaptor protein-2; brk kinase sub XM 371493 Homo sapiens similar to hypothetical protein (LOC388950), mRNA XM\_371494 Homo sapiens similar to Testis-specific Y-encoded-like protein 1 (TSPY-like XM 371495 Homo saplens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM 371496 Homo sapiens similar to Px19-like protein (25 kDa protein of relevant evolution XM 371497 Homo sapiens similar to expressed sequence C79663 (LOC388957), mRNA XM 371500 Homo sapiens similar to hypothetical protein 4921507A12 (LOC388960), mR XM 371501 Homo saplens hypothetical protein MGC22014 (MGC22014), mRNA XM\_371502 Homo sapiens similar to RIKEN cDNA 1810056020 (LOC388962), mRNA XM\_371503 Homo sapiens similar to Retinol dehydrogenase 12 (LOC388963), mRNA XM\_371504 Homo sapiens similar to hepatitis C virus core-binding protein 6; cervical can XM 371505 Homo sapiens similar to Phosphatidylethanolamine-binding protein (PEBP) ( XM\_371506 Homo sapiens LOC388969 (LOC388969), mRNA XM 371511 Homo saplens similar to anaphase promoting complex subunit 1; anaphase-XM 371513 Homo sapiens similar to RAN-binding protein 2-like 1 isoform 1; sperm memi XM 371514 Homo sapiens similar to WW domain binding protein 1 (LOC388975), mRNA XM 371515 Homo sapiens similar to protein that is immuno-reactive with anti-PTH polycli XM\_371517 Homo sapiens similar to immunoglobulin kappa light chain VC region (LOC3) XM\_371534 Homo sapiens similar to hypothetical protein (LOC389000), mRNA XM\_371535 Homo sapiens similar to hypothetical protein DKFZp434A171 (LOC389002), XM\_371536 Homo sapiens similar to tripartite motif-containing 43 (LOC389004), mRNA Homo sapiens similar to RING finger protein 18 (Testis-specific ring-finger pr XM 371537 Homo sapiens similar to hypothetical protein (LOC389007), mRNA XM 371539 XM\_371540 Homo sapiens ankyrin-related (UNQ2430), mRNA XM 371542 Homo sapiens RW1 protein (RW1), mRNA XM 371543 Homo sapiens LOC389012 (LOC389012), mRNA Homo sapiens similar to Sodium/hydrogen exchanger 4 (Na(+)/H(+) exchang XM\_371544 XM\_371546 Homo saplens similar to Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongati XM\_371547 Homo sapiens similar to Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongati XM\_371552 Homo sapiens similar to RAN-binding protein 2-like 1 isoform 1; sperm meml XM 371555 Homo sapiens similar to myosin-VIIb (LOC389031), mRNA XM 371558 Homo sapiens similar to FKSG30 (LOC389036), mRNA XM\_371561 Homo sapiens similar to CDNA sequence BC043098 (LOC389039), mRNA XM 371564 Homo sapiens similar to sequence-specific single-stranded-DNA-binding pro XM 371567 Homo sapiens similar to pote protein; Expressed in prostate, ovary, testis, ar XM 371568 Homo sapiens similar to pote protein; Expressed in prostate, ovary, testis, ar XM\_371569 Homo sapiens similar to Probable mitochondrial import receptor subunit TON

XM\_371571 Homo sapiens similar to breast cancer antigen NY-BR-1 (LOC389052), mRN XM\_371572 Homo sapiens similar to heterogeneous nuclear ribonucleoprotein K (LOC38

XM 371573 Homo sapiens neurexophilin 2 (NXPH2), mRNA

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XM 371575 Homo sapiens formin binding protein 3 (FNBP3), mRNA XM 371576 Homo sapiens KIAA1189 protein (KIAA1189), mRNA XM 371577 Homo sapiens similar to RNA polymerase B transcription factor 3 (MGC2390 XM 371581 Homo sapiens similar to zinc finger protein Sp5 (LOC389058), mRNA XM\_371583 Homo sapiens LOC389064 (LOC389064), mRNA XM\_371584 Homo sapiens similar to RIKEN cDNA B830010L13 gene (LOC389065), mRI XM\_371585 Homo sapiens LOC389066 (LOC389066). mRNA XM 371586 Homo sapiens hypothetical protein FLJ25415 (FLJ25415), mRNA XM 371588 Homo sapiens similar to Selenide, water dikinase 1 (Selenophosphate synthe XM\_371590 Homo sapiens KIAA1571 protein (KIAA1571), mRNA XM 371591 Homo sapiens similar to RIKEN cDNA 9430067K14 gene; Ras GTPase-activ XM 371592 Homo sapiens similar to RIKEN cDNA D630023F18 (LOC389073), mRNA XM 371593 Homo sapiens similar to REGULATED ENDOCRINE SPECIFIC PROTEIN 18 XM 371594 Homo sapiens similar to CAVP-target protein (CAVPT) (LOC389076), mRNA XM\_371595 Homo sapiens dedicator of cytokinesis 10 (DOCK10), mRNA XM\_371600 Homo sapiens similar to enterokinase (LOC389083), mRNA XM\_371603 Homo sapiens similar to hypothetical protein FLJ40243 (LOC389085), mRN/ XM\_371604 Homo sapiens hypothetical protein FLJ37034 (FLJ37034), mRNA XM\_371605 Homo sapiens hypothetical protein LOC151174 (LOC151174), mRNA XM 371606 Homo sapiens similar to seven transmembrane helix receptor (LOC389090), XM\_371614 Homo sapiens hypothetical protein FLJ10707 (FLJ10707), mRNA XM 371617 Homo sapiens TBP-Interacting protein (TIP120B), mRNA XM\_371618 Homo sapiens similar to nucleoporin 210; nuclear pore membrane glycoprote XM\_371619 Homo sapiens FYVE, RhoGEF and PH domain containing 5 (FGD5), mRNA XM\_371621 Homo sapiens similar to RIKEN cDNA B830010L13 gene (LOC389099), mRI XM\_371622 Homo saplens similar to 60S ribosomal protein L23a (LOC389101), mRNA XM\_371623 Homo sapiens similar to YPLR6490 (LOC389102), mRNA XM\_371625 Homo saplens LOC389106 (LOC389106), mRNA XM 371626 Homo sapiens similar to Hsp70/Hsp90 organizing protein homolog CG2720-I XM\_371629 Homo saplens similar to RIKEN cDNA 1110038F21 (LOC389111), mRNA XM\_371630 Homo sapiens similar to ribosomal protein S27 (LOC389112), mRNA XM 371631 Homo sapiens similar to hypothetical protein FLJ35863 (LOC389114), mRN/

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XM\_371632 Homo sapiens FLJ36157 protein (FLJ36157), mRNA
XM\_371638 Homo sapiens similar to muse fat 1 cadherin (LOC389117), mRNA
Homo sapiens similar to VLLR9392 (LOC389118), mRNA

XM\_ 371641 Homo sapiens similar to RIKEN EDNA 4821517D21 (LDC389120), mRNA XM\_ 371643 Homo sapiens similar to hypothetical protein MGC39725 (LDC389124), mRN XM\_ 371645 Homo sapiens similar to 409 ribosomal protein 510 (LDC369127), mRNA XM\_ 371647 Homo sapiens similar to 60998-PA (LDC369129), mRN 1000 sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371649 Homo sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371649 Homo sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371649 Homo sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371649 HOMO sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371647 HOMO sapiens similar to hypothetical protein 59158 isoform 1 (LDC369130), mRNA XM\_ 371647 HOMO sapiens similar to hypothetical protein 5916 HOMO sapi

XM\_371653 Homo sapiens similar to hypothetical protein FLJ11292 (LOC389135), mRNA XM\_371655 Homo sapiens similar to SVH-B (LOC389137), mRNA

XM\_371658 Homo sapiens similar to olfactory receptor GÅ\_x541RFPKGSP-55348161-55
XM\_371658 Homo sapiens similar to taminin receptor 1 (fibosomal protein SA); Pa0-3, to taminin receptor 1 (fibosomal protein SA); Pa0-3, to XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens similar to seven transmembrane habit receptor (LOC389144), XM\_371650 Homo sapiens

XM\_371662 Homo sapiens hypothetical protein LOC255330 (LOC255330), mRNA XM\_371663 Homo sapiens similar to WD repeat domain 10 isoform 3 (LOC389147), mRi

XM\_371664 Homo sapiens KIAA1257 protein (KIAA1257), mRNA XM\_371665 Homo sapiens LOC389151 (LOC389151), mRNA

XM\_371666 Homo sapiens LOC389152 (LOC389152), mRNA
XM\_371668 Homo sapiens similar to 60S ribosomal protein L21 (LOC389156), mRNA

XM\_371670 Homo sapiens similar to Piscr1 protein (LOC389158), mRNA
XM\_371671 Homo sapiens similar to Chromosome 1 open reading frame 37 (LOC389164)

XM\_371671 Homo sapiens similar to Chromosome 1 open reacting laters (LCC389168), mF XM\_371674 Homo sapiens similar to template acylvating factor-1 alpha (LCC389168), mF XM\_371674 Homo sapiens similar to hypothetical protein FLJ14957 (LCC389170), mRN/

XM\_371674 Homo sapiens similar to hypothetical protein FLJ14957 (LOC389170), mRN/
 XM\_371677 Homo sapiens similar to phosphoserine aminotransferase isoform 1 (LOC38)

XM\_371678 Homo sapiens LOC389174 (LOC389174), mRNA

- XM 371679 Homo sapiens similar to ribosomal protein L22 (LOC389175), mRNA XM 371680 Homo sapiens LOC389177 (LOC389177), mRNA XM\_371681 Homo sapiens similar to RING finger protein 13 (LOC389178), mRNA XM 371682 Homo sapiens similar to 5-hydroxytryptamine receptor 3 subunit C (LOC389 XM 371683 Homo sapiens LOC389187 (LOC389187), mRNA XM\_371684 Homo sapiens similar to FSHD Region Gene 2 protein (LOC389192), mRNA XM 371687 Homo sapiens LOC389197 (LOC389197), mRNA XM 371690 Homo sapiens LOC389202 (LOC389202), mRNA XM\_371691 Homo sapiens LOC389203 (LOC389203), mRNA XM\_371692 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM\_371693 Homo sapiens LOC389206 (LOC389206), mRNA XM\_371694 Homo sapiens similar to ENSANGP00000012385 (LOC389207), mRNA XM 371695 Homo sapiens similar to RIKEN cDNA 4732406D01 gene (LOC389208), mR XM 371697 Homo sapiens similar to expressed sequence AW060714 (LOC389211), mR XM 371698 Homo sapiens similar to KIAA1680 protein (LOC401145), mRNA XM 371701 Homo sapiens similar to template acylvating factor-I alpha (LOC389217), mF XM\_371702 Homo sapiens similar to Ribosomal protein L7A CG3314-PD (LOC389218), I XM 371705 Homo sapiens LOC389221 (LOC389221), mRNA XM 371706 Homo sapiens hypothetical protein KIAA1109 (KIAA1109), mRNA XM 371709 Homo sapiens ring finger protein 150 (RNF150), mRNA XM\_371710 Homo sapiens LOC389227 (LOC389227), mRNA XM\_371711 Homo sapiens similar to GRIK2 protein (LOC389228), mRNA XM\_371714 Homo sapiens similar to ring finger protein 129 (LOC389239), mRNA XM\_371715 Homo sapiens similar to alpha NAC/1.9.2. protein (LOC389240), mRNA XM\_371717 Homo sapiens odd Oz/Ten-m homolog 3 (ODZ3), mRNA XM\_371718 Homo sapiens similar to vesicle-associated soluble NSF attachment protein i XM 371719 Homo sapiens similar to RSTI689 (LOC389255), mRNA XM\_371722 Homo sapiens similar to Leucine-rich repeat-containing protein 14 (LOC3892 XM\_371725 Homo saplens similar to hypothetical protein (LOC389261), mRNA XM\_371726 Homo saplens similar to antifreeze glycoprotein precursor - black rockcod (Lt XM\_371728 Homo saplens similar to CDNA sequence BC012016 (LOC389276), mRNA XM\_371729 Homo sapiens similar to RPE-spondin (LOC389279), mRNA XM\_371731 Homo saplens similar to bA110H4.2 (similar to membrane protein) (LOC389) XM\_371732 Homo sapiens similar to RIKEN cDNA C230086A09 gene (LOC389282), mR XM\_371733 Homo sapiens hypothetical protein FLJ23577 (FLJ23577), mRNA XM\_371736 Homo saplens similar to FKSG62 (LOC389286), mRNA XM 371738 Homo saplens similar to annexin II receptor (LOC389289), mRNA XM 371740 Homo sapiens hypothetical protein FLJ23563 (FLJ23563), mRNA XM\_371741 Homo sapiens similar to hypothetical protein (LOC389293), mRNA XM\_371743 Homo sapiens similar to bA110H4.2 (similar to membrane protein) (LOC389) XM\_371749 Homo saplens similar to bA110H4.2 (similar to membrane protein) (LOC389) XM\_371754 Homo sapiens similar to nonhistone chromosomal protein HMG-17 - rat (LOC XM\_371755 Homo sapiens similar to Rho-guanine nucleotide exchange factor (Rho-intera XM\_371757 Homo sapiens similar to 60S ribosomal protein L7 (LOC389305), mRNA XM\_371758 Homo saplens similar to ribosomal protein L10a (LOC389308), mRNA XM\_371759 Homo sapiens hypothetical protein FLJ11292 (FLJ11292), mRNA XM\_371760 Homo sapiens hypothetical protein LOC116068 (LOC116068), mRNA XM\_371761 Homo sapiens KIAA0825 protein (KIAA0825), mRNA XM\_371762 Homo sapiens similar to Proteasome activator complex subunit 2 (Proteason XM\_371763 Homo sapiens LOC389313 (LOC389313), mRNA XM\_371764 Homo sapiens similar to NADH dehydrogenase subunit 5 (LOC389314), mRI XM\_371765 Homo sapiens LOC389315 (LOC389315), mRNA XM\_371768 Homo sapiens LOC389320 (LOC389320), mRNA XM\_371769 Homo sapiens LOC389321 (LOC389321), mRNA
- XM\_371772 Homo sapiens LOC389326 (LOC389326), mRNA

XM\_371770 Homo saplens similar to heterogeneous nuclear ribonucleoprotein K (LOC38 XM 371771 Homo saplens similar to hypothetical protein (LOC389323), mRNA

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XM 371776 Homo sapiens similar to hypothetical protein 4933429F08 (LOC389337), mR XM 371777 Homo sapiens hypothetical protein LOC348938 (LOC348938), mRNA XM 371778 Homo sapiens similar to RIKEN cDNA 4921536K21 (LOC389341), mRNA XM 371781 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM 371782 Homo sapiens similar to hypothetical protein (LOC389346), mRNA XM 371783 Homo sapiens similar to NY-REN-7 antigen (LOC389347), mRNA XM 371790 Homo sapiens similar to 6-pyruvoyl-tetrahydropterin synthase (LOC389351), XM\_371791 Homo sapiens similar to High mobility group protein 4 (HMG-4) (High mobility XM 371793 Homo sapiens similar to bA476I15.3 (novel protein similar to septin) (LOC38) XM\_371796 Homo sapiens similar to Protein phosphatase 1, regulatory subunit 3D (Prote XM\_371797 Homo sapiens LOC389365 (LOC389365), mRNA XM\_371798 Homo sapiens similar to C6orf52 protein (LOC389366), mRNA XM 371801 Homo sapiens O-acytransferase (membrane bound) domain containing 1 (O XM 371809 Homo sapiens chromosome 6 open reading frame 205 (C6orf205), mRNA XM\_371812 Homo sapiens major histocompatibility complex, class II, DQ alpha 1 (HLA-D XM 371813 Homo sapiens kinesin family member C1 (KIFC1), mRNA XM 371814 Homo sapiens similar to Rps15a protein (LOC389382), mRNA XM 371815 Homo sapiens similar to AAAL3045 (LOC389383), mRNA XM\_371816 Homo sapiens similar to RIKEN cDNA 4930539E08 (LOC389384), mRNA XM\_371817 Homo saplens similar to Cytosol aminopeptidase (Leucine aminopeptidase) XM 371818 Homo sapiens similar to Cytosol aminopeptidase (Leucine aminopeptidase) XM 371819 Homo sapiens similar to 60S ribosomal protein L12 (LOC389387), mRNA XM 371820 Homo sapiens similar to hypothetical protein BC006605 (LOC389389), mRN. XM\_371822 Homo saplens chromosome 6 open reading frame 110 (C6orf110), mRNA XM\_371823 Homo sapiens similar to hypothetical protein DKFZp434D2328 (LOC389394) XM\_371824 Homo sapiens similar to heterogeneous nuclear ribonucleoprotein A3 (LOC3 XM 371825 Homo sapiens similar to BXMAS2-10 protein (LOC389396), mRNA XM 371826 Homo sapiens similar to IVFI9356 (LOC389400), mRNA XM 371829 Homo sapiens similar to ENSANGP0000009924 (LOC389405), mRNA XM 371832 Homo sapiens KIAA1411 (KIAA1411), mRNA XM\_371835 Homo sapiens inhibitor of Bruton agammaglobulinemia tyrosine kinase (IBTk XM\_371837 Homo sapiens similar to oxidoreductase UCPA (LOC389416), mRNA XM\_371838 Homo sapiens ubiquitin specific protease 45 (USP45), mRNA XM\_371841 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC38 XM 371842 Homo sapiens LOC389421 (LOC389421), mRNA XM 371843 Homo sapiens similar to ribosomal protein S27a (LOC389425), mRNA XM 371844 Homo sapiens TSPY-like (TSPYL), mRNA XM 371845 Homo saplens similar to MGC32805 protein (LOC389427), mRNA XM\_371846 Homo sapiens similar to ribosomal protein L5; 60S ribosomal protein L5 (LO XM\_371847 Homo sapiens similar to RIKEN cDNA 2310057J18 (LOC389429), mRNA Homo sapiens chromosome 6 open reading frame 115 (C6orf115), mRNA XM 371848 Homo saplens chromosome 6 open reading frame 198 (C6orf198), mRNA XM\_371849 Homo sapiens similar to hypothetical protein 9130014G24 (LOC389431), mF XM 371850 Homo sapiens similar to RIKEN cDNA E130306M17 gene (LOC389432), mR XM 371851 XM\_371853 Homo sapiens similar to 60S ribosomal protein L27a (LOC389435), mRNA XM\_371856 Homo sapiens similar to frazzled CG8581-PA (LOC389444), mRNA Homo sapiens similar to 60S ribosomal protein L21 (LOC389445), mRNA XM 371857 XM\_371858 Homo sapiens similar to apolipoprotein(a) (EC 3.4.21.-) - rhesus macaque (fo XM\_371863 Homo sapiens family with sequence similarity 20, member C (FAM20C), mRI XM\_371873 Homo sapiens similar to zinc finger protein 316; kruppel-related zinc finger pr XM\_371874 Homo sapiens similar to Matn2-prov protein (LOC389462), mRNA XM 371877 Homo sapiens KIAA0960 protein (KIAA0960), mRNA XM 371878 Homo sapiens hypothetical protein FLJ14712 (FLJ14712), mRNA XM 371879 Homo sapiens LOC389466 (LOC389466), mRNA XM 371884 Homo sapiens similar to 40S ribosomal protein S26 (LOC389472), mRNA

XM\_371885 Homo sapiens similar to Neuronal protein 3.1 (p311 protein) (LOC389473), n XM\_371889 Homo sapiens similar to RP9 protein (LOC389477), mRNA

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XM 371891 Homo sapiens KIAA0877 protein (KIAA0877), mRNA XM\_371897 Homo sapiens hypothetical protein DKFZp761|2123 (DKFZp761|2123), mRN XM\_371901 Homo sapiens similar to PRO0758 (LOC389490), mRNA XM\_371904 Homo sapilens similar to Protein p8 (Candidate of metastasis 1) (LOC389493 XM\_371917 Homo sapiens similar to Williams Beuren syndrome chromosome region 19 ( XM 371923 Homo sapi ens similar to opposite strand transcription unit to Stag3; Gats pro XM\_371925 Homo sapi ens similar to transcription factor GTF2IRD2 (LOC389524), mRNA XM\_371930 Homo sapiens similar to PMS4 homolog mismatch repair protein - human (Lt XM 371933 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 9A (PPP XM 371936 Homo sapiens similar to hypothetical protein MGC56855 (LOC389538), mRN XM 371939 Homo sapiens similar to CG14977-PA (LOC389541), mRNA XM\_371943 Homo sapi ens similar to Williams-Beuren syndrome critical region protein 19 XM\_371948 Homo sapi ens similar to zinc finger protein 312; forebrain embryonic zinc fing XM\_371949 Homo sapi ens similar to cardiac leiomodin (LOC389550), mRNA XM 371953 Homo sapi ens KIAA1466 protein (KIAA1466), mRNA XM 371954 Homo sapi ens nucleoporin 205kDa (NUP205), mRNA XM\_371956 Homo sapiens KIAA1549 protein (KIAA1549), mRNA XM\_371960 Homo sapiens KIAA1277 (KIAA1277), mRNA XM\_371995 Homo sapiens similar to hypothetical protein MGC41943 (LOC389592), mRN XM 372002 Homo sapi ens similar to amyotrophic lateral sclerosis 2 (juvenile) chromoson XM 372004 Homo sapiens LOC389602 (LOC389602), mRNA XM 372005 Homo sapiens LOC389603 (LOC389603), mRNA XM 372006 Homo sapiens similar to vasoactive Intestinal peptide receptor 2 (LOC38960-XM\_372009 Homo sapiens similar to bA476l15.3 (novel protein similar to septin) (LOC38) XM\_372010 Homo sapiens LOC389607 (LOC389607), mRNA XM\_372011 Homo sapiens similar to HARL2754 (LOC389610), mRNA XM\_372013 Homo sapiens similar to FLJ10408 protein (LOC389611), mRNA XM\_372017 Homo sapiens similar to seven transmembrane helix receptor (LOC389616), XM\_372018 Homo sapiens similar to hypothetical protein FLJ10408 (LOC389617), mRN/ XM 372019 Homo sapiens similar to FLJ10408 protein (LOC389618), mRNA XM\_372024 Homo sapiens LOC389622 (LOC389622), mRNA XM\_372025 Homo sapiens similar to Activated RNA polymerase II transcriptional coactive XM\_372026 Homo sapiens similar to seven transmembrane helix receptor (LOC389626). XM\_372027 Homo sapiens LOC389627 (LOC389627), mRNA XM\_372028 Homo sapiens similar to FLJ10408 protein (LOC389630), mRNA XM\_372030 Homo saplens similar to FLJ10408 protein (LOC389633), mRNA XM\_372031 Homo saplens mitochondrial tumor suppressor gene 1 (MTSG1), mRNA XM 372035 Homo sapiens LOC389643 (LOC389643), mRNA XM\_372036 Homo sapiens similar to 60S ribosomal protein L5 (LOC389644), mRNA XM\_372037 Homo sapiens LOC389649 (LOC389649), mRNA XM\_372038 Homo saplens hypothetical protein FLJ32731 (FLJ32731), mRNA XM 372039 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC38 XM\_372040 Homo sapiens similar to asparagine synthetase; glutamine-dependent aspar. XM\_372041 Homo sapiens similar to RPLK9433 (LOC389658), mRNA XM\_372042 Homo sapiens similar to polycystin 1-like 3 (LOC389660), mRNA XM\_372045 Homo sapi ens similar to hypothetical protein (LOC389663), mRNA XM\_372046 Homo sapiens similar to tropomyosin 4 (LOC389667), mRNA XM\_372047 Homo sapiens similar to hypothetical protein FLJ10307 (LOC389668), mRN/ XM 372048 Homo saplens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM\_372050 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM\_372054 Homo sapiens LOC389678 (LOC389678), mRNA XM\_372055 Homo sapiens similar to hypothetical protein (LOC389679), mRNA XM\_372058 Homo sapiens Pvt1 oncogene homolog, MYC activator (mouse) (PVT1), mRI XM 372060 Homo sapiens similar to FLJ46354 protein (LOC389690), mRNA

XM\_372063 Homo sapiens similar to FLJ46354 protein (LOC389694), mRNA XM\_372063 Homo sapiens similar to epiplakin (LOC389697), mRNA XM\_372099 Homo sapiens similar to prot GOR (LOC389699), mRNA WC05944981 [file:///E:/WC05944981.qpd]

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XM\_372074 Homo sapiens similar to Selenoprotein T (LOC389704), mRNA XM\_372075 Homo sapiens similar to RIKEN cDNA 3110001D03 gene (M. musculus) (MC XM\_372076 Homo sapiens similar to 2700029M09Rik protein (LOC389705), mRNA XM\_372077 Homo sapiens LOC389708 (LOC389708), mRNA XM\_372078 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC38 XM 372083 Homo sapiens KIAA1161 (KIAA1161), mRNA XM\_372086 Homo sapiens similar to RAB1B, member RAS oncogene family; small GTP-XM 372088 Homo sapiens similar to cell recognition molecule CASPR3 isoform 1 (LOC3) XM 372089 Homo sapiens similar to chromosome 9 open reading frame 36 (LOC389723 XM 372090 Homo sapiens similar to cell recognition molecule CASPR3 isoform 1 (LOC3 XM 372092 Homo saplens similar to FK506-binding protein 4 (Peptidyl-protyl dis-trans isc XM 372094 Homo sapiens similar to chromosome 9 open reading frame 36 (LOC389730 XM 372097 Homo sapiens similar to cell recognition molecule CASPR3 isoform 1 (LOC3 XM\_372099 Homo sapiens similar to bA251017.4 (similar to methylenetetrahydrofolate d XM 372100 Homo sapiens LOC389739 (LOC389739), mRNA XM 372102 Homo sapiens LOC389742 (LOC389742), mRNA XM 372103 Homo sapiens LOC389744 (LOC389744), mRNA XM 372104 Homo sapiens similar to breast cancer antigen NY-BR-1 (LOC389745), mRN XM\_372108 Homo sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC; XM\_372109 Homo saplens similar to mitochondrial C1-tetrahydrofolate synthase (LOC38) XM\_372110 Homo saplens aquaporin 7-like (LOC375719), mRNA XM 372111 Homo saplens similar to mitochondrial C1-tetrahydrofolate synthase (LOC38) XM\_372112 Homo sapiens similar to phosphoglucomutase 5 (LOC389753), mRNA XM 372114 Home sapiens similar to mitochondrial C1-tetrahydrofolate synthase (LOC38) XM 372116 Homo sapiens similar to COBW domain containing protein 3 (LOC389760), r XM\_372117 Homo sapiens similar to CG3073-PA (LOC375743), mRNA XM\_372118 Homo sapiens similar to RIKEN cDNA 1700013B16 (LOC389761), mRNA XM\_372119 Homo saplens LOC389762 (LOC389762), mRNA XM 372120 Homo sapiens similar to RIKEN cDNA 1700013B16 (LOC389763), mRNA XM\_372121 Homo sapiens similar to kinesin family member 27 (LOC389764), mRNA XM\_372122 Homo saplens similar to kinesin family member 27 (LOC389765), mRNA XM\_372123 Homo sapiens similar to RIKEN cDNA 4921517D22 (LOC389766), mRNA XM\_372124 Homo sapiens zinc finger, CCHC domain containing 6 (ZCCHC6), mRNA XM\_372125 Homo sapiens similar to potassium channel tetramerisation domain containir XM\_372128 Homo sapiens similar to Osteotesticular phosphatase; protein tyrosine phosp XM 372132 Homo sapiens similar to RIKEN cDNA 2810453106 (LOC389776), mRNA XM\_372133 Homo sapiens KIAA1529 (KIAA1529), mRNA XM\_372137 Homo saplens similar to RIKEN cDNA 4732481H14 (LOC389785), mRNA XM\_372138 Homo sapiens LOC389786 (LOC389786), mRNA XM\_372140 Homo sapiens LOC389789 (LOC389789), mRNA XM\_372141 Homo saplens similar to phosphatidylinositol phosphate kinase-like protein (I XM\_372142 Homo sapiens LOC389791 (LOC389791), mRNA XM\_372143 Homo sapiens hypothetical protein LOC375757 (LOC375757), mRNA XM\_372148 Homo sapiens similar to CDNA sequence BC034076 (LOC389796), mRNA XM 372150 Homo sapiens LOC389799 (LOC389799), mRNA XM 372154 Homo sapiens similar to bA74P14.2 (novel protein) (LOC389803), mRNA XM 372157 Homo sapiens similar to HSPC324 (LOC389811), mRNA XM 372159 Homo sapiens similar to CG15216-PA (LOC389813), mRNA XM 372160 Homo sapiens similar to LPAL6438 (LOC389814), mRNA XM\_372161 Homo sapiens similar to CDNA sequence BC004853 (LOC389816), mRNA XM 372162 Homo sapiens LOC389817 (LOC389817), mRNA XM\_372163 Homo sapiens similar to cell recognition molecule CASPR3 isoform 1 (LOC3) XM\_372168 Homo sapiens LOC389821 (LOC389821), mRNA XM\_372169 Homo sapiens similar to hypothetical protein (LOC389822), mRNA

XM\_372175 Homo saplens LOC389823 (LOC389823), mRNA XM\_372177 Homo saplens similar to Surfett locus protein 1 (LOC389825), mRNA XM 372180 Homo saplens similar to RIKEN cDNA 111002H13 (LOC389827), mRNA

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XM 372181 Homo sapiens similar to MSTP058 (LOC389828), mRNA XM 372182 Homo sapiens hypothetical protein FLJ39378 (FLJ39378), mRNA XM\_372186 Homo sapiens similar to hypothetical protein MGC27019 (LOC389830), mRN XM\_372190 Homo sapiens similar to AF038169 protein (LOC389832), mRNA XM\_372191 Homo sapiens similar to hypothetical protein MGC27019 (LOC389833), mRN XM\_372192 Homo sapiens similar to RIKEN cDNA 2700049P18 (LOC389835), mRNA XM 372193 Homo sapiens KIAA1751 protein (KIAA1751), mRNA XM\_372194 Homo sapiens hypothetical protein MGC13275 (MGC13275), mRNA XM 372195 Homo sapiens agrin (AGRN), mRNA XM\_372197 Homo sapiens similar to Glutathione peroxidase 1 (GSHPx-1) (Cellular glutat XM 372198 Homo sapiens hypothetical protein MGC17403 (MGC17403), mRNA XM\_372199 Homo sapiens similar to MAP/ERK kinase kinase 5; apoptosis signal regulati XM\_372200 Homo sapiens similar to Ran-specific GTPase-activating protein (Ran binding XM 372201 Homo sapiens similar to hypothetical protein FLJ35782 (LOC389843), mRN/ XM 372202 Homo sapiens similar to ferritin, heavy polypeptide-like 17 (LOC389844), mR XM 372203 Homo sapiens similar to Amine oxidase [flavin-containing] A (Monoamine oxi XM\_372204 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM\_372205 Homo sapiens similar to hypothetical protein, MGC:7199 (LOC389850), mRN XM\_372208 Homo sapiens similar to dJ54B20.3 (novel protein similar to lysozyme C (1,4 XM 372209 Homo sapiens similar to Acetyl-coenzyme A acyltransferase 2 (LOC389854). XM 372210 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 3F (PPP XM\_372212 Homo saplens similar to G antigen 7 (LOC389855), mRNA XM\_372213 Homo sapiens similar to ubiquitin specific protease 27, X chromosome (LOC XM 372214 Homo sapiens similar to nuclear protein p30 (LOC389857), mRNA XM 372223 Homo saplens similar to 28S ribosomal protein S18c, mitochondrial precurso XM\_372224 Homo sapiens similar to PAGE-5 protein (LOC389860), mRNA XM 372226 Homo sapiens similar to Zinc finger X-linked protein ZXDB (LOC389862), mF XM 372227 Homo sapiens similar to PAI-1 mRNA-binding protein; chromodomain helicae XM 372231 Homo sapiens hypothetical protein FLJ20105 (FLJ20105), mRNA XM 372233 Homo sapiens similar to Selenide, water dikinase 1 (Selenophosphate synthe XM 372239 Homo sapiens hypothetical protein BC007652 (LOC92129), mRNA XM 372245 Homo sapiens similar to R28830 1 (LOC389885), mRNA XM\_372247 Homo sapiens similar to RIKEN cDNA 1110012005 (LOC389887), mRNA XM 372248 Homo sapiens similar to FLJ20527 protein (LOC389888), mRNA XM 372253 Homo sapiens similar to ENSANGP00000013187 (LOC389891), mRNA XM\_372254 Homo sapiens similar to Mothers against decapentaplegic homolog interactir XM\_372255 Homo saplens similar to MGC68553 protein (LOC389895), mRNA XM\_372257 Homo saplens similar to ubiquitin-conjugating enzyme E2N (LOC389898), m XM 372258 Homo sapiens similar to HS1 binding protein (LOC389899), mRNA XM 372261 Homo sapiens similar to DKFZP586L0724 protein (LOC389900), mRNA XM\_372262 Homo sapiens similar to ATP-dependent DNA helicase II, 70 kDa subunit (Lu XM\_372267 Homo sapiens zinc finger protein 275 (ZNF275), mRNA XM\_372268 Homo sapiens similar to Extracellular matrix protein 2 precursor (Matrix glycc XM 372272 Homo sapiens LOC389905 (LOC389905), mRNA XM\_372273 Homo sapiens similar to Serine/threonine protein kinase PRKX (Protein kinas XM\_372274 Homo sapiens similar to Serine/threonine protein kinase PRKX (Protein kinase XM 372275 Homo sapiens LOC389911 (LOC389911), mRNA XM\_372282 Homo sapiens cytokine receptor-like factor 2 (CRLF2), mRNA XM 372286 Homo sapiens neuroligin 4, Y linked (NLGN4Y), mRNA XM\_372289 Homo sapiens chromosome Y open reading frame 15A (CYorf15A), mRNA XM 372292 Homo saplens similar to RNA binding motif protein, Y chromosome, family 1 XM 372295 Homo sapiens similar to bA476l15.3 (novel protein similar to septin) (LOC38) XM 372296 Homo sapiens similar to deleted in azoospermia (LOC389926), mRNA XM\_372302 Homo sapiens similar to 3-hydroxyhexobarbital dehydrogenase 1/3-alpha, 17 XM 372303 Homo sapiens similar to proline-rich proteoglycan 2 (LOC389936), mRNA

XM 372304 Homo sapiens similar to SI:dZ211O13.2 (novel protein) (LOC389938), mRN/

XM 372305 Homo sapiens similar to Gliacolin (LOC389941), mRNA

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XM 372306 Homo sapiens similar to polyketide synthase (LOC389944), mRNA XM\_372307 Homo sapiens LOC389950 (LOC389950), mRNA XM\_372308 Homo sapiens similar to Zinc finger protein 37A (Zinc finger protein KOX21) XM\_372309 Homo sapiens similar to KIAA1975 protein (LOC389952), mRNA XM\_372310 Homo sapiens similar to Ig kappa chain V region (Z4) - human (LOC389953) XM\_372311 Homo sapiens similar to cubilin; intrinsic factor-cobalamin receptor; intrinsic f XM\_372312 Homo sapiens similar to KIAA0592 protein (LOC389959), mRNA XM\_372314 Homo sapiens similar to RIKEN cDNA 2610524G07 (LOC389972), mRNA XM\_372315 Homo sapiens similar to 60S ribosomal protein L12 (LOC389974), mRNA XM\_372316 Homo sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC) XM 372317 Homo sapiens similar to hypothetical protein DKFZp586O0120.1 - human (fr. XM 372319 Homo sapiens similar to Gene with similarity to rat kidney-specific (KS) gene XM 372320 Homo sapiens similar to bA182L21.1 (novel protein similar to hypothetical pr XM\_372321 Homo sapiens similar to bA182L21.1 (novel protein similar to hypothetical pr XM 372322 Homo sapiens similar to nuclear DNA-binding protein; small unique nuclear r XM\_372323 Homo sapiens similar to nuclear DNA-binding protein; small unique nuclear r XM\_372324 Homo sapiens similar to lipase A precursor; Lipase A, lysosomal acid, choles XM 372325 Homo sapiens similar to Tebp-pending-prov protein (LOC390000), mRNA XM 372328 Homo saplens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC3900 XM 372329 Homo sapiens similar to Mitochondrial import receptor subunit TOM22 homol XM\_372330 Homo sapiens similar to 40S ribosomal protein S26 (LOC390009), mRNA XM\_372331 Homo sapiens similar to Sax-1 (LOC390010), mRNA XM 372334 Homo saplens similar to double homeobox protein (LOC390016), mRNA XM\_372335 Homo saplens similar to double homeobox protein (LOC390017), mRNA XM\_372337 Homo sapiens similar to sperm associated AWN protein (LOC390020), mRN XM\_372340 Homo sapiens similar to double homeobox protein (LOC390024), mRNA XM\_372341 Homo sapiens similar to Potential carboxypeptidase-like protein X2 precurso XM\_372343 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC390031), mRNA XM\_372345 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC390033), mRNA XM\_372346 Homo sapiens similar to olfactory receptor MOR16-1 (LOC390034), mRNA XM 372347 Homo saplens similar to Olfactory receptor 52K1 (LOC390036), mRNA XM\_372348 Homo saplens similar to Olfactory receptor 5211 (LOC390037), mRNA XM 372349 Homo sapiens similar to seven transmembrane helix receptor (LOC390038), XM\_372350 Homo sapiens similar to olfactory receptor MOR11-2 (LOC390039), mRNA XM\_372351 Homo sapiens similar to olfactory receptor MOR8-1 (LOC390046), mRNA XM\_372352 Homo saplens similar to odorant receptor HOR3beta5 (LOC390054), mRNA XM\_372353 Homo sapiens similar to HOR5Beta6 (LOC390058), mRNA XM\_372354 Homo sapiens similar to HOR5Beta7 (LOC390059), mRNA XM\_372355 Homo sapiens similar to Olfactory receptor 51Q1 (LOC390061), mRNA XM\_372356 Homo saplens similar to Olfactory receptor 5111 (HOR5beta11) (LOC390063 XM\_372357 Homo sapiens similar to Olfactory receptor 51l2 (HOR5beta12) (LOC390064 XM 372358 Homo sapiens similar to HOR5Beta13 (LOC390065), mRNA XM\_372359 Homo sapiens similar to Olfactory receptor 52D1 (HOR5beta14) (LOC39006) XM\_372360 Homo saplens similar to seven transmembrane helix receptor (LOC390067), XM\_372361 Homo sapiens similar to Olfactory receptor 52N4 (LOC390072), mRNA XM\_372362 Homo saplens similar to Olfactory receptor 56B2 (LOC390073), mRNA XM\_372364 Homo sapiens similar to Olfactory receptor 52N1 (LOC390075), mRNA XM\_372365 Homo sapiens similar to Olfactory receptor 52N2 (LOC390077), mRNA XM\_372366 Homo sapiens similar to Olfactory receptor 52E6 (LOC390078), mRNA XM\_372367 Homo sapiens similar to Offactory receptor 52E6 (LOC390079), mRNA XM\_372368 Homo sapiens similar to Olfactory receptor 52E4 (LOC390081), mRNA XM\_372369 Homo sapiens similar to Olfactory receptor 52E5 (LOC390082), mRNA XM 372370 Homo sapiens similar to Olfactory receptor 56A6 (LOC390083), mRNA XM\_372371 Homo saplens similar to Olfactory receptor 56A4 (LOC390084), mRNA XM\_372372 Homo sapiens similar to seven transmembrane helix receptor (LOC390091), XM\_372373 Homo sapiens similar to Olfactory receptor 10A6 (LOC390093), mRNA XM\_372374 Homo sapiens similar to large subunit ribosomal protein L36a (LOC390096),

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XM\_372375 Homo sapiens similar to 1-aminocyclopropane-1-carboxylate synthase (LOC: XM\_372376 Homo sapiens similar to Olfactory receptor 4X1 (LOC390113), mRNA XM\_372377 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC390120), mRNA XM\_372378 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC390121), mRNA XM\_372379 Homo sapiens similar to hypothetical protein FLJ14082 (LOC390124), mRN/ XM\_372380 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC390125), mRNA XM\_372381 Homo sapiens similar to olfactory receptor MOR234-3 (LOC390128), mRNA XM 372382 Homo sapiens similar to olfactory receptor MOR231-3 (LOC390133), mRNA XM\_372384 Homo sapiens similar to Olfactory receptor 4A5 (LOC390137), mRNA XM\_372385 Homo sapiens similar to olfactory receptor (LOC390138), mRNA XM\_372386 Homo sapiens similar to Olfactory receptor 5D13 (LOC390142), mRNA XM 372387 Homo sapiens olfactory receptor, family 5, subfamily L, member 2 (OR5L2), I XM 372388 Homo sapiens similar to Olfactory receptor 5D16 (LOC390144), mRNA XM 372389 Homo sapiens similar to seven transmembrane helix receptor (LOC390148). XM\_372390 Homo sapiens similar to Olfactory receptor 8H2 (LOC390151), mRNA XM\_372391 Homo sapiens similar to Olfactory receptor 8H3 (LOC390152), mRNA XM\_372393 Homo sapiens similar to Olfactory receptor 5T3 (LOC390154), mRNA XM\_372394 Homo sapiens similar to seven transmembrane helix receptor (LOC390155), XM 372395 Homo sapiens similar to Olfactory receptor 8K1 (LOC390157), mRNA XM\_372396 Homo sapiens similar to ribosomal protein L5; 60S ribosomal protein L5 (LOI XM\_372397 Homo sapiens similar to Olfactory receptor 5M9 (LOC390162), mRNA XM\_372399 Homo sapiens similar to seven transmembrane helix receptor (LOC390166), XM\_372400 Homo sapiens similar to Olfactory receptor 5M1 (OST050) (LOC390167), mF XM\_372401 Homo sapiens similar to Olfactory receptor 5M1 (OST050) (LOC390168), mF XM\_372402 Homo sapiens similar to olfactory receptor GA\_x6K02T2Q125-47402610-474 XM\_372403 Homo sapiens similar to Olfactory receptor 9G1 (LOC390174), mRNA XM 372404 Homo sapiens similar to GTP-binding protein alpha-s subunit (LOC390175). XM 372405 Homo sapiens similar to Olfactory receptor 5AK2 (LOC390181), mRNA XM\_372406 Homo sapiens similar to Olfactory receptor 5B2 (OST073) (LOC390186), mR XM\_372409 Homo saplens similar to Olfactory receptor 5B16 (LOC390191), mRNA XM\_372410 Homo sapiens LOC390192 (LOC390192), mRNA XM\_372411 Homo sapiens similar to Olfactory receptor 5AN1 (LOC390195), mRNA XM\_372412 Homo sapiens similar to seven transmembrane helix receptor (LOC390197), XM\_372413 Homo sapiens similar to Olfactory receptor 4D9 (LOC390199), mRNA XM\_372414 Homo sapiens similar to seven transmembrane helix receptor (LOC390201), XM\_372415 Homo sapiens similar to membrane-spanning 4-domains, subfamily A, memb XM\_372416 Homo saplens similar to leucine-rich repeat-containing 10; leucine-rich repeat XM\_372418 Homo sapiens similar to Double C2, gamma (LOC390213), mRNA XM 372420 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM 372423 Homo sapiens similar to tripartite motif-containing 43 (LOC390231), mRNA XM 372424 Homo sapiens similar to tripartite motif-containing 43 (LOC390233), mRNA XM\_372425 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC390234), mRNA XM 372426 Homo sapiens similar to RIKEN cDNA 0610012A05 (LOC390237), mRNA XM\_372427 Homo saplens similar to tripartite motif-containing 43 (LOC390238), mRNA XM\_372428 Homo sapiens similar to folate receptor 3 (LOC390243), mRNA XM\_372429 Homo sapiens similar to FLJ10251 protein (LOC390245), mRNA XM 372430 Homo sapiens similar to RIKEN cDNA 2210418O10 (LOC390246), mRNA Homo sapiens similar to putative protein family member (XC187) (LOC39025 XM 372431 XM 372432 Homo sapiens similar to programmed cell death-2/Rp8 homolog (LOC39025) XM 372433 Homo sapiens similar to brain-specific homeodomain protein (LOC390259), r XM 372434 Homo sapiens similar to Olfactory receptor 6X1 (LOC390260), mRNA XM 372435 Homo sapiens similar to Olfactory receptor 6M1 (LOC390261), mRNA XM\_372436 Homo sapiens similar to Olfactory receptor 10G4 (LOC390264), mRNA XM\_372437 Homo sapiens similar to Olfactory receptor 10G7 (LOC390265), mRNA XM\_372438 Homo sapiens similar to Olfactory receptor 10D4 (LOC390266), mRNA XM\_372441 Homo sapiens similar to seven transmembrane helix receptor (LOC390271), XM\_372442 Homo sapiens similar to seven transmembrane helix receptor (LOC390272),

XM\_372443 Homo sapiens similar to Olfactory receptor 8A1 (OST025) (LOC390275), mR XM\_372444 Homo sapiens similar to Bcl-2 homologous antagonist/killer (Apoptosis regula XM\_372445 Homo sapiens similar to retinitis pigmentosa GTPase regulator (LOC390278) XM\_372447 Homo sapiens similar to eukaryotic translation initiation factor 3, subunit 5 (e XM\_372448 Homo sapiens similar to signal recognition particle 14kDa (homologous Alu F XM\_372449 Homo sapiens similar to o Ifactory receptor GA\_x6K02T2PVTD-14054886-14 XM 372450 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM 372452 Homo sapiens similar to Peptidylprolyl isomerase A (cyclophilin A) (LOC3902 XM\_372453 Homo sapiens similar to RIKEN cDNA 1110014F12 (LOC390300), mRNA XM\_372456 Homo sapiens similar to transient receptor protein 6 (LOC390310), mRNA XM 372457 Homo sapiens similar to o Ifactory receptor like protein (LOC390313), mRNA XM 372459 Homo saplens similar to o Ifactory receptor MOR111-1 (LOC390321), mRNA XM\_372460 Homo sapiens similar to o Ifactory receptor MOR112-1 (LOC390323), mRNA XM 372461 Homo sapiens similar to a lfactory receptor MOR109-1 (LOC390324), mRNA XM 372462 Homo sapiens similar to olfactory receptor GA x6K02T2PULF-11304679-11; XM 372463 Homo sapiens similar to olfactory receptor MOR108-4 (LOC390326), mRNA XM 372464 Homo sapiens similar to olfactory receptor GA x6K02T2PULF-11553313-11! XM 372465 Homo sapiens similar to o Ifactory receptor MOR114-12 (LOC390328), mRN/ XM 372466 Homo sapiens similar to poly(A) binding protein, cytoplasmic 4 isoform 2 (LO XM\_372468 Homo sapiens similar to T-box transcription factor TBX20 (LOC390338), mRI XM 372469 Homo sapiens similar to Gag-Pro-Pol-Env protein (LOC390342), mRNA XM\_372470 Homo sapiens similar to microtubule-associated proteins 1A/1B light chain 3 XM\_372471 Homo sapiens similar to 60S ribosomal protein L10 (QM protein) (Tumor sup XM 372472 Homo sapiens similar to Small nuclear ribonucleoprotein Sm D2 (snRNP con XM 372473 Homo sapiens similar to eukarvotic translation elongation factor 1 alpha 1; C XM 372474 Homo saplens similar to ri bosomal protein L9 (LOC390353), mRNA XM\_372476 Homo sapiens similar to dynein, axonemal, heavy chain 11; situs inversus vis XM 372480 Homo sapiens similar to KIAA1786 protein (LOC390365), mRNA XM\_372482 Homo sapiens similar to 4OS ribosomal protein S6 (Phosphoprotein NP33) (L XM\_372483 Homo saplens similar to proline rich protein 2 (LOC390371), mRNA XM\_372485 Homo sapiens similar to Mitochondrial omithine transporter 1 (Solute carrier XM\_372486 Homo sapiens similar to Alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3-l XM 372487 Homo sapiens similar to chromosome 9 open reading frame 12; 1,3,4,5,6-pe XM 372488 Homo sapiens similar to histone 1, H2bc; H2B histone family, member S (LO XM 372490 Homo sapiens similar to Striatin (LOC390387), mRNA XM 372491 Homo sapiens similar to a lyceraldehyde-3-phosphate dehydrogenase (phosp XM\_372493 Homo sapiens similar to ADP,ATP carrier protein T2 - human (LOC390405), XM\_372494 Homo sapiens similar to chromosome 15 open reading frame 2 (LOC390414 XM 372496 Homo sapiens similar to ADP-ribosylation factor 4 (LOC390423), mRNA XM 372497 Homo sapiens similar to mKIAA0324 protein (LOC390426), mRNA XM\_372498 Homo sapiens LOC390427 (LOC390427), mRNA XM\_372499 Homo sapiens similar to Olfactory receptor 4M1 (LOC390428), mRNA XM\_372500 Homo sapiens similar to Olfactory receptor 4N2 (LOC390429), mRNA XM\_372501 Homo sapiens similar to Olfactory receptor 4K2 (LOC390431), mRNA XM\_372502 Homo sapiens similar to olfactory receptor MOR239-6 (LOC390432), mRNA XM\_372503 Homo sapiens similar to Olfactory receptor 4K13 (LOC390433), mRNA XM 372504 Homo saplens similar to Olfactory receptor 4K17 (LOC390436), mRNA XM 372505 Homo sapiens similar to Olfactory receptor 4N5 (LOC390437), mRNA XM 372506 Homo sapiens similar to Olfactory receptor 11G2 (LOC390439), mRNA XM 372507 Homo sapiens similar to Olfactory receptor 11H4 (LOC390442), mRNA XM 372508 Homo sapiens similar to Ribonuclease-like protein 9 precursor (LOC390443) XM 372509 Homo sapiens similar to Olfactory receptor 5AU1 (LOC390445), mRNA XM\_372521 Homo sapiens similar to SMT3 suppressor of mif two 3 homolog 2 (LOC3904 XM\_372522 Homo sapiens similar to Plasmodium falciparum trophozoite antigen r45-like XM\_372524 Homo sapiens LOC390481 (LOC390481), mRNA XM 372525 Homo sapiens similar to ribosomal protein L31 (LOC390485), mRNA XM 372527 Homo sapiens similar to 60S ribosomal protein L21 (LOC390488), mRNA

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XM 372528 Homo sapiens hypothetical protein FLJ36749 (FLJ36749), mRNA XM 372532 Homo sapiens similar to Alpha-1-antitrypsin-related protein precursor (LOC3) XM 372534 Homo sapiens similar to proline-rich glycoprotein (sgp 158) (LOC390507), mF XM 372535 Homo saniens similar to MGC53446 protein (LOC390508), mRNA XM 372536 Homo sapiens similar to chloride intracellular channel 6; chloride channel for XM 372542 Homo sapiens similar to protein kinase related to Raf protein kinases; Metho XM 372543 Homo sapiens similar to immunoglobulin heavy-chain-2 light-chain-2 VH seg XM\_372544 Homo sapiens similar to hect domain and RLD 2 (LOC390533), mRNA XM 372547 Homo sapiens similar to CDC42-binding protein kinase alpha isoform A; ser-XM 372548 Homo sapiens similar to Olfactory receptor 4M2 (LOC390538), mRNA XM 372549 Homo sapiens similar to seven transmembrane helix receptor (LOC390539), XM\_372550 Homo sapiens similar to salivary proline-rich protein (LOC390540), mRNA XM\_372553 Homo sapiens similar to neuronal nonacetlycholine binding subunit (LOC390 XM\_372555 Homo sapiens similar to hect domain and RLD 2 (LOC390549), mRNA XM 372556 Home sapiens similar to hect domain and RLD 2 (LOC390551), mRNA XM 372559 Homo sapiens similar to Dynamin-1 (D100) (Dynamin, brain) (B-dynamin) (L4 XM 372560 Homo sapiens similar to hect (homologous to the E6-AP (UBE3A) carboxyl to XM 372562 Homo sapiens similar to neuronal nicotinic acetylcholine receptor beta4 subu XM 372563 Homo sapiens similar to amyloid beta A4 precursor protein-binding, family A, XM 372565 Homo sapiens similar to amyloid beta A4 precursor protein-binding, family A, XM 372566 Homo sapiens similar to GLP\_457\_13116\_11626 (LOC390570), mRNA XM 372568 Homo sapiens similar to casein kinase 1, alpha 1 (LOC390575), mRNA XM 372569 Homo sapiens similar to KIAA1728 protein (LOC390577), mRNA XM\_372570 Homo saplens similar to zinc finger protein 444; endothellal zinc finger protei XM\_372573 Homo sapiens similar to hypothetical protein BC009980 (LOC390594), mRN. XM 372574 Homo sapiens similar to ubiquitin associated protein (LOC390595), mRNA XM 372575 Homo sapiens similar to cell division cycle 2-like 1 (PITSLRE proteins) isofor XM 372576 Homo saplens similar to RIKEN cDNA C230094B15 (LOC390598), mRNA XM 372577 Homo sapiens similar to High mobility group protein 1 (HMG-1) (Amphoterin) XM 372578 Homo sapiens hypothetical protein LOC123346 (LOC123346), mRNA XM 372579 Homo sapiens similar to Dynamin-1 (D100) (Dynamin, brain) (B-dynamin) (Lt XM 372580 Homo sapiens similar to Dynamin-1 (D100) (Dynamin, brain) (B-dynamin) (Lt XM\_372581 Homo saplens similar to hypothetical protein FLJ20452 (LOC390611), mRN/ XM\_372583 Homo sapiens similar to Dynamin-1 (D100) (Dynamin, brain) (B-dynamin) (Lt XM 372584 Homo sapiens similar to RIKEN cDNA 6430502M16 gene (LOC390616), mR XM 372585 Homo saplens similar to hypothetical protein DKFZp434l1020 (LOC390623). XM 372586 Homo sapiens similar to goldi autoantigen goldin subfamily a2-like (LOC3906 XM 372588 Homo sapiens similar to hypothetical protein (LOC390633), mRNA XM\_372589 Homo sapiens similar to RIKEN cDNA D330012F22 gene (LOC390637), mR XM 372591 Homo sapiens similar to Golgi autoantigen, golgin subfamily a, 2; golgin-95; I XM 372592 Homo sapiens hypothetical protein LOC145814 (LOC145814), mRNA XM 372593 Homo sapiens similar to Serine/threonine protein kinase PRKX (Protein kinase XM 372596 Homo sapiens similar to Olfactory recentor 4F6 (LOC390648), mRNA XM 372597 Homo sapiens similar to Olfactory receptor 4F15 (LOC390649), mRNA XM 372598 Homo sapiens similar to Olfactory receptor 4F14 (LOC390650), mRNA XM\_372599 Homo sapiens similar to olfactory receptor MOR245-8 (LOC390651), mRNA XM 372601 Homo sapiens similar to hect domain and RLD 2 (LOC390654), mRNA XM 372606 Homo sapiens similar to C1g Related (LOC390664), mRNA XM\_372607 Homo sapiens similar to Neuronal pentraxin II precursor (NP-II) (NP2) (LOC3 XM\_372608 Homo sapiens similar to hypothetical protein 6820428D13 (LOC390668), mF XM 372609 Homo sapiens similar to ATP-binding cassette transporter ABCA3 (LOC3906 XM 372611 Homo sapiens similar to Hypothetical protein MGC56918 (LOC390680), mRt XM 372614 Homo sapiens similar to NAD(P) dependent steroid dehydrogenase-like (LOC XM 372615 Homo sapiens LOC390684 (LOC390684), mRNA XM\_372616 Homo sapiens similar to CDC37-like gene (LOC390688), mRNA XM 372617 Homo sapiens similar to Protein C20orf27 (LOC390690), mRNA XM 372618 Homo sapiens similar to Filamin B (FLN-B) (Beta-filamin) (Actin-binding like |

XM 372622 Homo sapiens similar to hypothetical protein MGC5244 (LOC390697), mRN/ XM 372625 Homo sapiens similar to protein kinase related to Raf protein kinases; Metho XM\_372626 Homo sapiens similar to protein phosphatase 2A 48 kDa regulatory subunit is XM\_372628 Homo sapiens similar to Ig heavy chain - human (fragment) (LOC390709), m XM 372629 Homo sapiens similar to la H-chain V-region (DP-40) (LOC390710), mRNA XM 372630 Homo sapiens similar to immunog lobulin M chain (LOC390712), mRNA XM\_372631 Homo sapiens similar to immunog lobulin M chain (LOC390713), mRNA XM\_372632 Homo sapiens similar to Ig H-chain V-region (DP-39) (LOC390714), mRNA XM\_372633 Homo saplens similar to Ig heavy chain - human (fragment) (LOC390715), m XM 372634 Homo sapiens similar to double homeobox protein (LOC390718), mRNA XM 372637 Homo sapiens similar to Rab31-like (LOC390728), mRNA XM 372638 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM\_372639 Homo sapiens similar to carboxylesterase 3 (LOC390732), mRNA XM 372640 Homo sapiens similar to chromosome 15 open reading frame 2 (LOC390734 XM\_372641 Homo sapiens similar to Spermatogenesis associated protein 2 (Spermatoge XM\_372642 Homo sapiens similar to MGC9515 protein (LOC390737), mRNA XM\_372643 Homo sapiens similar to mKIAA1261 protein (LOC390738), mRNA XM 372644 Homo sapiens similar to Serine/Threonine protein kinase (LOC390743), mRI XM 372646 Homo sapiens similar to proline rich protein (LOC390747), mRNA XM\_372647 Homo sapiens hypothetical protein LOC348180 (LOC348180), mRNA XM 372648 Homo sapiens similar to embryonic poly(A) binding protein 2 (LOC390748), r XM\_372650 Homo sapiens similar to putative protein (LOC390753), mRNA XM\_372651 Homo sapiens similar to hypothetical class II basic helix-loop-helix protein (Li XM\_372654 Homo sapiens similar to RIKEN cDNA 2810408A11 (LOC390760), mRNA XM\_372655 Homo saplens similar to RIKEN cDNA 9930039A11 gene (LOC390761), mRI XM\_372657 Homo sapiens similar to 60S ribosomal protein L23a (LOC390765), mRNA XM 372658 Homo sapiens similar to Ribonucle ase H1 (RNase H1) (Ribonuclease H type XM 372660 Homo sapiens similar to Ubiquitin-conjugating enzyme E2-24 kDa (Ubiquitin-XM 372662 Homo sapiens similar to ubiquitin specific protease 6; tre-2 oncogene; hyperi XM 372663 Homo saplens similar to Ribosomal protein S6 kinase I (S6K) (P70-S6K) (LO XM\_372666 Homo sapiens similar to Chemokine (C-C motif) ligand 3-like 1 (LOC390788) XM\_372668 Homo sapiens similar to ADP-ribo sylation factor-like 8; ADP-ribosylation-like XM 372669 Homo sapiens similar to type I hair keratin 6 (LOC390792), mRNA XM\_372670 Homo saplens similar to keratin associated protein 2-4; keratin associated pr XM\_372673 Homo sapiens similar to hypothetical protein A930006D11 (LOC390796), mF XM\_372675 Homo sapiens similar to wingless-type MMTV integration site family, member XM\_372676 Homo saplens similar to S100 calcium-binding protein A10; S100 calcium-bin XM 372677 Homo saplens similar to DEAH (Asp-Glu-Ala-His) box polypeptide 40 (LOC3) XM\_372678 Homo sapiens similar to Monocarboxylate transporter 7 (MCT 7) (MCT 6) (LC XM 372679 Homo sapiens similar to cleavage and polyadenylation specific factor 4; mus XM 372680 Homo sapiens similar to Hypothetical protein KIAA0176 (LOC390814), mRN. XM 372682 Homo saplens similar to L-threonine aldolase (LOC390816), mRNA XM\_372685 Homo sapiens similar to aminoperatidase puromycin sensitive; puromycin-sei XM\_372687 Homo saplens similar to hypothetical protein BC007436 (LOC390824), mRN. XM\_372689 Homo sapiens similar to mitochon drial carrier triple repeat 1 (LOC390828), rr XM\_372692 Homo sapiens similar to KIAA0563-related gene (LOC390845), mRNA XM\_372693 Homo sapiens similar to 27 kDa Golgi SNARE protein (Golgi SNAP receptor XM\_372695 Homo sapiens similar to Chain A, Crystal Structure Of The R463a Mutant Of XM 372696 Homo sapiens similar to FKSG30 (LOC390861), mRNA XM\_372697 Homo sapiens similar to minus agglutinin (LOC390864), mRNA XM 372698 Homo sapiens similar to hypothetical protein (LOC390865), mRNA XM 372700 Homo sapiens similar to immediate early protein homolog (LOC390869), mR XM 372701 Homo sapiens similar to CXYorf1-related protein (LOC390871), mRNA XM\_372702 Homo sapiens similar to onecut 3 (LOC390874), mRNA XM 372703 Homo sapiens similar to fos39347\_1 (LOC390875), mRNA XM 372704 Homo saplens similar to ribosomal protein L35 (LOC390876), mRNA XM 372705 Homo sapiens similar to adenwate kinase (EC 2.7.4.3), cytosolic - common c

XM 372707 Homo saplens similar to nuclear factor, interleukin 3, regulated (LOC390880) XM\_372708 Homo sapiens similar to Offactory receptor 7G2 (Offactory receptor 19-13) (C XM 372709 Homo sapiens similar to Offactory receptor 7G3 (OST085) (LOC390883), mF XM 372711 Homo sapiens similar to 60S RIBOSOMAL PROTEIN L12 (LOC390891), mR XM 372712 Homo saplens similar to Olfactory receptor 7A10 (OST027) (LOC390892), m XM 372714 Homo sapiens similar to Olfactory receptor 7A2 (LOC390894), mRNA XM\_372715 Homo sapiens similar to olfactory receptor, family 7, subfamily A, member 17 XM 372716 Homo sapiens widely-interspaced zinc finger motifs (WIZ), mRNA XM 372719 Homo sapiens similar to Zinc finger protein 492 (LOC390906), mRNA XM 372720 Homo sapiens similar to Zinc finger protein 93 (Zinc finger protein HTF34) (L. XM 372721 Homo sapiens similar to cytochrome P450 monooxygenase (LOC390914), ir XM 372723 Homo sapiens similar to RP2 protein, testosterone-regulated - ricefield mous XM 372724 Homo sapiens similar to Zinc finger protein 132 (LOC390920), mRNA XM 372726 Homo sapiens similar to hypothetical protein (LOC390927), mRNA XM\_372727 Homo sapiens similar to RIKEN cDNA C330005M16 (LOC390928), mRNA XM 372728 Homo sapiens similar to HSPC270 (LOC390929), mRNA XM 372730 Homo saplens similar to Erf (LOC390937), mRNA XM\_372731 Homo sapiens similar to pregnancy specific beta-1-glycoprotein 1 (LOC3909 XM\_372732 Homo sapiens similar to R28379\_1 (LOC390940), mRNA XM 372733 Homo sapiens LOC390941 (LOC390941), mRNA XM 372735 Homo saplens similar to paraneoplastic neuronal antigen MM2 (LOC390945) XM 372737 Homo sapiens similar to heterog eneous nuclear ribonucleoprotein M isoform XM\_372740 Homo sapiens similar to ENSAN GP00000004655 (LOC390955), mRNA XM 372741 Homo saplens similar to peptidyl-Pro cis trans isomerase (LOC390956), mRI XM 372745 Homo sapiens similar to Zinc fincter protein Kr18 (HKr18) (LOC390963), mR1 XM 372746 Homo sapiens similar to YME1-like 1; ATP-dependent metalloprotease FtsH' XM\_372748 Homo sapiens similar to 1060P1 1.3 (killer inhibitory receptor 2-2-2 (KIR222) XM\_372749 Homo sapiens similar to protein kinase Bsk146 (LOC390975), mRNA XM\_372750 Homo sapiens similar to ret finger protein-like 1 (LOC390976), mRNA XM 372751 Homo sapiens similar to zinc finger protein 495 (LOC390977), mRNA XM\_372753 Homo sapiens similar to Zinc finger protein 264 (LOC390980), mRNA XM 372754 Homo sapiens similar to 5830417C01Rik protein (LOC390981), mRNA XM 372755 Homo saplens similar to RIKEN cDNA B230396O12 (LOC390988), mRNA XM\_372757 Homo sapiens similar to helix-loop-helix transcription factor (LOC390992), m XM\_372758 Homo saplens similar to Solute carrier family 2, facilitated glucose transporte XM\_372759 Homo sapiens similar to 60S ribosomal protein L10 (QM protein) (Tumor sup XM 372760 Homo saplens similar to Hypothetical protein DJ1198H6.2 (LOC390999), mF XM\_372761 Homo sapiens similar to Hypothetical protein DJ845O24.2 (LOC391001), mF XM 372762 Homo sapiens similar to Hypothetical protein DJ1198H6.2 (LOC391002), mF Homo sapiens similar to hypothetical protein (LOC391003), mRNA XM 372763 XM 372764 Homo sapiens similar to Hypothetical protein DJ845O24.2 (LOC391004), mF XM 372765 Homo sapiens similar to KIAA1026 protein (LOC391005), mRNA XM 372767 Homo sapiens similar to Peptidy1 arginine deiminase, egg and embryo abunc XM\_372768 Homo sapiens similar to Putative dynein light chain protein DJ8B22.1 (LOC3) XM 372769 Homo sapiens similar to Group IIC secretory phospholipase A2 precursor (PI XM 372770 Homo sapiens similar to hypothetical protein AE2 (LOC391015), mRNA XM 372771 Homo saplens similar to secrete d acid phosphatase 2 (SAP2) (LOC391021), XM 372773 Homo sapiens similar to ribosomal protein L18a; 60S ribosomal protein L18a XM 372774 Homo sapiens hypothetical protein DJ159A19.3 (DJ159A19.3), mRNA XM 372775 Homo sapiens similar to protein tyrosine phosphatase, receptor type, U isofo XM 372776 Homo sapiens similar to chromo some 14 open reading frame 138 (LOC3910 XM 372777 Homo sapiens similar to forkhead box protein O6 (LOC391030), mRNA XM 372778 Homo sapiens similar to 40S ribosomal protein S15a (LOC391035), mRNA XM 372779 Homo saplens similar to RIKEN cDNA 5730434103 gene (LOC391040), mRN XM 372780 Homo sapiens similar to Solute carrier family 2, facilitated glucose transporte XM\_372781 Homo sapiens similar to NAD-dependent deacetylase sirtuin 5 (SIR2-like pro XM 372784 Homo sapiens similar to Stroma I cell derived factor receptor 2 (LOC391059),

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XM 372785 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC3910 XM 372788 Homo sapiens similar to SNAG1 (LOC391086), mRNA XM 372789 Homo sapiens similar to hypothetical protein MGC8902 (LOC391088), mRN/ XM 372792 Homo sapiens similar to Hypothetical protein DJ845O24.1 (LOC391092), mF XM 372795 Homo sapiens similar to histone protein Hist2h3c1 (LOC391097), mRNA XM\_372796 Homo sapiens similar to Olfactory receptor 10K1 (LOC391107), mRNA XM 372797 Homo sapiens similar to Olfactory receptor 10K1 (LOC391109), mRNA XM 372798 Homo sapiens similar to seven transmembrane helix receptor (LOC391110), XM\_372799 Homo sapiens similar to Olfactory receptor 6Y1 (LOC391112), mRNA XM 372800 Homo sapiens similar to Olfactory receptor 6K3 (LOC391114), mRNA XM 372801 Homo sapiens similar to porcine serum amyloid P component (SAP) (LOC39 XM 372802 Homo sapiens similar to hypothetical protein A030011M19 (LOC391123), ml XM 372803 Homo saplens similar to ribosomal protein S17 (LOC391130), mRNA XM 372804 Homo sapiens similar to hypothetical protein BC015183 (LOC391133), mRN. XM 372805 Homo saplens similar to dJ612B18.1 (similar to 40S ribosomal protein) (LOC XM 372806 Homo sapiens similar to Multisynthetase complex auxiliary component p43 (I XM 372807 Homo sapiens similar to Rho-GTPase-activating protein 8 (LOC391144), mR XM 372809 Homo sapiens LOC391156 (LOC391156), mRNA XM 372811 Homo sapiens similar to ribosomal protein L31 (LOC391161), mRNA XM 372812 Homo sapiens similar to Glyceraldehyde 3-phosphate dehydrogenase, liver ( XM 372813 Homo sapiens similar to Voltage-dependent anion-selective channel protein XM 372815 Homo sapiens similar to 40S ribosomal protein S26 (LOC391165), mRNA XM 372816 Homo sapiens similar to hypothetical protein D11Ertd497e (LOC391169), mF XM\_372817 Homo sapiens similar to hypothetical protein (LOC391170), mRNA XM\_372818 Homo sapiens similar to kinesin-like protein (103.5 kD) (klp-6) (LOC391185), XM\_372820 Homo sapiens similar to Olfactory receptor 11L1 (LOC391189), mRNA XM\_372821 Homo sapiens similar to Olfactory receptor 2L8 (LOC391190), mRNA XM\_372822 Homo sapiens similar to Olfactory receptor 2AK2 (LOC391191), mRNA XM 372823 Homo saplens olfactory receptor, family 2, subfamily L, member 2 (OR2L2), I XM 372824 Homo sapiens similar to seven transmembrane helix receptor (LOC391192), XM 372825 Homo saplens similar to Olfactory receptor 2M6 (LOC391194), mRNA XM 372826 Homo saplens similar to seven transmembrane helix receptor (LOC391195). XM 372827 Homo sapiens similar to Olfactory receptor 2M7 (LOC391196), mRNA XM 372833 Homo saplens similar to Hypothetical protein FLJ10709 (LOC391201), mRN/ XM 372834 Homo sapiens similar to Tissue alpha-L-fucosidase precursor (Alpha-L-fucos XM 372838 Homo saplens similar to RIKEN cDNA B230396O12 (LOC391205), mRNA XM 372840 Homo sapiens similar to ribosomal protein L36; 60S ribosomal protein L36 (L XM 372841 Homo saplens similar to Olfactory receptor 2T3 (LOC391210), mRNA XM\_372842 Homo sapiens similar to Olfactory receptor 2G3 (LOC391211), mRNA XM 372843 Homo sapiens similar to Olfactory receptor 2T5 (LOC391212), mRNA XM 372845 Homo sapiens similar to seven transmembrane helix receptor (LOC391214), XM 372858 Homo saplens similar to scratch; scratch 1 (LOC391226), mRNA XM 372859 Homo sapiens similar to Homeobox protein Nkx-2.4 (Homeobox protein NKX XM 372863 Homo sapiens similar to nodulin (LOC391240), mRNA XM 372864 Homo sapiens similar to Soggy-1 protein precursor (SGY-1) (LOC391241), rr XM 372866 Homo saplens similar to LPIN3 (LOC391248), mRNA XM\_372869 Homo saplens similar to dJ601O1.1 (novel protein with Kunitz/Bovine pancre XM\_372870 Homo sapiens similar to Ubiquitin-like protein SMT3C precursor (Ubiquitin-hc XM 372871 Homo sapiens similar to bA164D18.1 (novel protein similar to KIAA0233) (LC XM 372873 Homo sapiens similar to putative glycine-rich protein (LOC391261), mRNA XM\_372874 Homo sapiens similar to salivary proline-rich protein (LOC391262), mRNA XM\_372875 Homo sapiens similar to KIAA0685 protein (LOC391268), mRNA XM\_372876 Homo sapiens similar to hypothetical protein DKFZp434A171 (LOC391269), XM 372878 Homo sapiens similar to 60S ribosomal protein L23a (LOC391282), mRNA

XM 372879 Homo sapiens chromosome 21 open reading frame 57 (C21orf57), mRNA XM\_372880 Homo sapiens LOC391284 (LOC391284), mRNA XM 372882 Homo sapiens hypothetical protein LOC128954 (LOC128954), mRNA

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XM\_372884 Homo sapiens cat eye syndrome chromosome region, candidate 2 (CECR2). XM 372887 Homo sapiens similar to minus applutinin (LOC391296), mRNA XM 372889 Homo sapiens similar to KIAA0649 protein (LOC391298), mRNA XM 372890 Homo sapiens LOC391299 (LOC391299), mRNA XM 372891 Homo sapiens LOC391303 (LOC391303), mRNA XM 372892 Homo sapiens similar to KIAA0649 protein (LOC391304), mRNA XM\_372893 Homo sapiens similar to sushi domain containing 2; Sushi domain (SCR repe XM 372894 Homo sapiens similar to Hypothetical protein DJ1198H6.2 (LOC391306), mF XM 372900 Homo sapiens similar to D-dopachrome tau tomerase (Phenylpyruvate tauton XM 372901 Homo sapiens similar to tum- transplantation antigen P198 (LOC391328), ml XM 372905 Homo sapiens similar to KIAA0563 gene product (LOC391335), mRNA XM 372907 Homo saplens similar to erythrocyte membrane-associated giant protein anti-XM\_372908 Homo sapiens similar to vitelline envelope sperm lysin receptor (LOC391340 XM 372910 Homo sapiens similar to Hypothetical protein CBG24508 (LOC391342), mRN XM\_372911 Homo sapiens similar to CG2839-PA (LOC391343), mRNA XM 372913 Homo sapiens similar to Mucln 2 precursor (Intestinal mucin 2) (LOC391347). XM 372914 Homo sapiens similar to MGC52970 protein (LOC391348), mRNA XM 372916 Homo sapiens similar to peptidyl-Pro cis trains isomerase (LOC391352), mRI XM 372917 Homo sapiens similar to Cerebellar-degene ration-related antigen 1 (CDR34) XM 372918 Homo sapiens similar to Mothers against decapentaplegic homolog interactir XM 372919 Homo sapiens similar to ENSANGP000000 18456 (LOC391356), mRNA XM 372920 Homo sapiens similar to Ubiquinol-cytochro me C reductase complex 11 kDa XM\_372921 Homo sapiens similar to hypothetical protein HSPC152 (LOC391358), mRN/ XM\_372922 Homo sapiens similar to Epithelial membrane protein-2 (EMP-2) (XMP protei XM 372923 Homo sapiens similar to class II basic helix-loop-hellx protein TCF23 (LOC39) XM 372924 Homo sapiens similar to human alpha-caternin (LOC391362), mRNA XM\_372926 Homo sapiens similar to ribosomal protein S12 (LOC391370), mRNA XM\_372927 Homo sapiens tetratricopeptide repeat dom ain 7 (TTC7), mRNA XM 372928 Homo sapiens similar to C-terminal binding protein 2 isoform 2; ribeye (LOCS XM 372933 Homo sapiens similar to Immunoglobulin kappa light chain variable region O XM\_372940 Homo sapiens similar to Adrenoleukodystro-phy protein (ALDP) (LOC391403) XM\_372941 Homo sapiens similar to Ig kappa chain V region (Z4) - human (LOC391405) XM\_372942 Homo sapiens similar to immunoglobulin anti-gp96/grp94 variable region of f XM 372945 Homo sapiens similar to phenol sulfotransferase (LOC391418), mRNA XM\_372946 Homo saplens similar to sulfotransferase 1C (LOC391419), mRNA XM 372947 Home sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC) XM 372950 Homo sapiens similar to ENSANGP000000 O4103 (LOC391426), mRNA XM 372952 Homo sapiens similar to lg kappa chain pre-cursor V region (orphon V108) - h XM 372953 Homo saplens similar to Selenide, water dik inase 1 (Selenophosphate synthe XM 372954 Homo sapiens similar to hypothetical protein (LOC391429), mRNA XM 372957 Homo sapiens similar to FKSG30 (LOC391 442), mRNA XM 372958 Homo sapiens similar to PRED65 (LOC391 445), mRNA XM 372959 Homo sapiens similar to rRNA intron-encoded homing endonuclease (LOC3) XM 372963 Homo sapiens similar to Kinesin heavy chain isoform 5C (Kinesin heavy chair XM\_372964 Homo sapiens similar to ATP synthase alpha chain, mitochondrial precursor XM 372965 Homo sapiens similar to KIAA0181 (LOC39 1456), mRNA XM 372966 Homo sapiens similar to protein 40kD (LOC391462), mRNA XM 372967 Homo sapiens similar to dim1; dim1 (S. pombe) (LOC391466), mRNA XM 372969 Homo sapiens similar to DYStrophin related (417.4 kD) (dvs-1) (LOC391475) XM 372970 Homo sapiens similar to Alpha-endosulfine (LOC391481), mRNA XM 372973 Homo sapiens similar to guanidinoacetate methyltransferase; GAMT (LOC39 XM 372974 Homo sapiens similar to UDP-glucuronosyltransferase 1-5 precursor, micros XM 372975 Homo saplens similar to TAR DNA-binding protein-43 (TDP-43) (LOC391494 XM\_372977 Homo sapiens similar to olfactory receptor MOR208-2 (LOC391496), mRNA XM 372978 Homo sapiens similar to ENSANGP00000007346 (LOC391497), mRNA

XM\_372979 Homo sapiens similar to Involucin (LOC39 1498), mRNA

XM 372980 Homo sapiens similar to EST gb[ATTS1136 comes from this gene. (LOC391-

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XM\_372981 Homo sapiens similar to Hypothetical protein CBG20540 (LOC391501), mRN XM\_372982 Homo sapiens similar to Gamma-2-syntrophin (G2SYN) (Syntrophin 5) (SYN XM\_372983 Homo sapiens syntrophin, gamma 2 (SNTG2), mRNA XM 372984 Homo sapiens similar to Drosophila melanogaster CG8797 gene product-rela XM\_372985 Homo sapiens similar to CHCHD4 protein (LOC391510), mRNA XM\_372986 Homo sapiens similar to WD repeat domain 10 isoform 3 (LOC391512), mR1 XM\_372987 Homo sapiens similar to ENSANGP00000014786 (LOC391513), mRNA XM 372988 Home sapiens similar to peolidyl-Pro cis trans isomerase (LOC391532), mRI XM\_372991 Homo sapiens similar to coated vesicle membrane protein (LOC391540), mF XM\_372992 Homo sapiens similar to hypothetical protein FLJ23834 (LOC391542), mRN/ XM 372993 Homo sapiens similar to MGC39820 protein (LOC391544), mRNA XM 372995 Homo sapiens similar to Msx2-interacting protein (SMART/HDAC1 associate XM\_372996 Homo sapiens similar to hypothetical protein DKFZp434L0850 (LOC391555) XM 372997 Homo sapiens olfactory receptor, family 5, subfamily K, member 1 (OR5K1), XM 372998 Homo sapiens similar to MLRQ subunit of the NADH ubiquinone oxidoreduct XM 373001 Homo sapiens similar to Histone H2B.n (H2B/n) (H2B.2) (LOC391566), mRN XM 373002 Homo sapiens similar to Succinate dehydrogenase [ubiquinone] iron-sulfur p XM 373003 Homo sapiens similar to pepfidyl-Pro cis trans isomerase (LOC391587), mRI XM\_373004 Homo sapiens similar to KIAA1552 protein (LOC391594), mRNA XM 373005 Homo saplens similar to alpha-1 platein precursor (LOC391601), mRNA XM 373006 Home sapiens similar to Probable ATP-dependent helicase DHX34 (DEAH-b XM 373007 Homo sapiens LOC391610 (LOC391610), mRNA XM 373009 Homo sapiens HPX-153 homeobox (HSPX153), mRNA XM\_373016 Homo sapiens similar to deubiquiti nating enzyme 3 (LOC391622), mRNA XM\_373021 Homo sapiens similar to deubiquitinating enzyme 3 (LOC391628), mRNA XM 373022 Homo sapiens similar to seven transmembrane helix receptor (LOC391630). XM 373025 Homo sapiens similar to SNAG1 (LOC391652), mRNA XM\_373026 Homo sapiens similar to Hypothetical protein MGC66426 (LOC391654), mR1 XM 373027 Homo sapiens similar to 40S ribosomal protein S15a (LOC391656), mRNA XM\_373028 Homo sapiens similar to UDP-glucuronosyltransferase (LOC391661), mRNA XM\_373029 Homo saplens similar to Synaptic glycoprotein SC2 (LOC391676), mRNA XM 373030 Homo sapiens hypothetical protein LOC285556 (LOC285556), mRNA XM 373031 Homo sapiens similar to TUBULIN BETA CHAIN (LOC391692), mRNA XM 373033 Homo sapiens similar to ribosoma protein S23 (LOC391701), mRNA XM 373035 Homo sapiens similar to RIKEN cDNA 9930021J17 (LOC391705), mRNA XM 373036 Homo sapiens similar to Chromatin accessibility complex protein 1 (CHRAC-XM 373037 Homo sapiens similar to ring finger protein 129 (LOC391711), mRNA XM\_373038 Homo sapiens similar to ring finger protein 129 (LOC391712), mRNA XM\_373039 Homo sapiens similar to ring finger protein 129 (LOC391714), mRNA XM\_373040 Homo saplens similar to RING finger protein 15 (Zinc finger protein RoRet) ( XM\_373041 Homo saplens similar to Claudin-22 (LOC391721), mRNA XM\_373042 Homo sapiens similar to myosin:SUBUNIT=regulatory light chain (LOC39172 XM 373043 Homo sapiens similar to Heslike (LOC391723), mRNA XM 373053 Homo sapiens similar to Microneme antigen (LOC391733), mRNA XM 373056 Home saplens similar to Transcription Initiation factor TFIID 28 kDa subunit ( XM 373057 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373058 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373059 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373061 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373073 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373075 Home sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_373076 Homo sapiens similar to TAF11 RNA polymerase II, TATA box binding protei XM 373077 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 373078 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_373079 Homo sapiens similar to histone (15.4 kD) (his-72) (LOC391769), mRNA XM 373080 Homo sapiens similar to ENSANGP00000014197 (LOC391770), mRNA

XM 373082 Homo sapiens similar to CG12279-PA (LOC391784), mRNA

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XM 373084 Homo sapiens similar to ribosomal protein L31 (LOC391789), mRNA XM\_373085 Homo sapiens similar to cadherin 12, type 2 preproprotein; Br-cadherin; cadh XM 373087 Homo sapiens similar to cadherin 12, type 2 preproprotein; Br-cadherin; cadh XM 373088 Homo sapiens similar to cadherin 12, type 2 preproprotein; Br-cadherin; cadh XM\_373089 Homo sapiens similar to hypothetical protein FLJ10891 (LOC391796), mRN/ XM\_373090 Homo sapiens LOC391797 (LOC391797), mRNA XM 373091 Home sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM 373092 Homo sapiens similar to peptidyl-Pro ds trans isomerase (LOC391807), mRI XM 373093 Homo sapiens similar to 28 kDa heat- and acid-stable phosphoprotein (PDGI XM 373094 Homo sapiens similar to protease (prosome, macropain) 26S subunit, ATPas XM 373096 Homo sapiens similar to 60S RIBOSOMAL PROTEIN L21 (LOC391823), mR XM\_373097 Homo sapiens similar to Thyroid hormone receptor-associated protein compl XM\_373098 Homo sapiens similar to beta-tropomyosin (LOC391844), mRNA XM\_373099 Homo sapiens similar to hypothetical protein (LOC391847), mRNA XM 373100 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM\_373101 Homo sapiens similar to neuralized homolog (LOC391849), mRNA XM\_373103 Homo sapiens similar to Beta-1,4-galactosyltransferase 7 (Beta-1,4-GalTase XM 373106 Homo sapiens similar to Tb-291 membrane associated protein (LOC391859) XM 373107 Homo sapiens similar to cAMP-regulated phosphoprotein 19 (ARPP-19) (LO XM 373109 Homo sapiens hypothetical protein LOC34O156 (LOC340156), mRNA XM 373156 Homo sapiens hypothetical protein MGC26484 (MGC26484), mRNA XM 373157 Homo sapiens similar to Phosphorylase B kinase gamma catalytic chain, ske XM 373170 Homo sapiens hypothetical protein LOC54103 (LOC54103), mRNA XM 373171 Homo sapiens similar to dynein, cytoplasmic, light peptide; 8kD LC; dynein L XM\_373178 Homo sapiens similar to Zn-alpha-2-glycoprotein precursor (LOC392082), ml XM\_373180 Homo saplens similar to Cohesin subunit SA-3 (Stromal antigen 3) (SCC3 hc XM\_373190 Homo saplens similar to dJ753D5.2 (novel protein similar to RPS17 (40S ribo XM 373209 Homo sapiens similar to seven transmembrane helix receptor (LOC392133), XM\_373210 Homo saplens similar to offactory receptor MOR261-1 (LOC392138), mRNA XM 373214 Homo sapiens similar to Mtr3 (mRNA transport regulator 3)-homolog: Mtr3 (n XM\_373219 Homo sapiens similar to gastrulation brain homeobox 1 (LOC392152), mRN/ XM\_373223 Homo sapiens similar to polycystic kidney clisease 1-like 3 (LOC392159), mF XM 373224 Homo saplens similar to cAMP-dependent protein kinase type I-beta regulator XM 373227 Homo sapiens similar to Olfactory receptor 4F3 (LOC392167), mRNA XM\_373233 Homo sapiens similar to 60S ribosomal protein L10 (QM protein) (Tumor sup XM\_373234 Homo sapiens similar to demidefensin 3 (LOC392182), mRNA XM\_373236 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM 373238 Homo saplens similar to deubiquitinating enzyme 3 (LOC392188), mRNA XM 373239 Homo sapiens similar to ubiquitin-specific protease 17-like protein (LOC3921 XM\_373241 Homo sapiens similar to beta-1,4-mannosyltransferase; beta-1,4 mannosyltra XM\_373242 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM 373243 Homo sapiens similar to deubiquitinating enzyme 3 (LOC392197), mRNA XM 373245 Homo sapiens similar to 60S ribosomal protein L32 (LOC392202), mRNA XM 373246 Homo sapiens similar to Ac2-210 (LOC392208), mRNA XM\_373248 Homo sapiens similar to VENT-like homeobox 2; hemopoletic progenitor hon XM\_373249 Homo saplens similar to Ig lambda light chain leader and V-region (LOC3922 XM\_373250 Homo sapiens similar to Band 4.1-like protein 5 (LOC392218), mRNA XM\_373252 Homo sapiens similar to coiled-coil-helix-coiled-coil-helix domain containing : XM 373253 Homo sapiens similar to RIKEN cDNA 0610038D11 (LOC392222), mRNA XM 373255 Homo sapiens similar to hypothetical class II basic helix-loop-helix protein (L) XM\_373257 Homo sapiens similar to large subunit ribosomal protein L36a (LOC392248), XM\_373259 Homo sapiens similar to glyceraldehyde-3-phosphate dehydrogenase (LOC3 XM 373260 Homo saplens similar to growth differentiation factor 16 (LOC392255), mRN/ XM 373263 Homo sapiens similar to laminin-binding protein (LOC392262), mRNA XM\_373265 Homo sapiens similar to cDNA sequence BC024139 (LOC392274), mRNA XM\_373266 Homo sapiens similar to sphingomyelin phosphodiesterase 3, neutral membi XM 373270 Homo sapiens similar to Rab coupling protein; Rab-interacting recycling protein

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XM\_373275 Homo sapiens similar to peptidyl-Pro cis trans isomerase (LOC392285), mRI XM\_373276 Homo sapiens similar to chromosome 15 open reading frame 12; mitochondi XM 373277 Homo sapiens similar to microtubule-associated proteins 1A/1B light chain 3 XM\_373281 Homo sapiens similar to Chloride intracellular channel protein 4 (Intracellular XM 373283 Homo sapiens similar to Ferritin light chain (Ferritin L subunit) (LOC392299), XM 373284 Homo sapiens similar to High mobility group protein 4-like (HMG-4L) (LOC39 XM\_373287 Homo sapiens similar to RIKEN cDNA 4930412F15 gene (LOC392307), mRI XM\_373288 Homo sapiens similar to Olfactory receptor 70 (LOC392308), mRNA XM 373289 Homo sapiens similar to Olfactory receptor 13J1 (LOC392309), mRNA XM\_373290 Homo sapiens similar to high mobility group protein homolog HMG4 (LOC39; XM\_373295 Homo sapiens similar to hypothetical protein MGC17986 (LOC392332), mRN XM 373297 Homo sapiens LOC392339 (LOC392339), mRNA XM 373298 Homo sapiens similar to adenylate kinase 3 alpha like (LOC392347), mRNA XM 373300 Homo sapiens similar to tMDC I (LOC392351), mRNA XM 373301 Homo saplens similar to peptidyl-Pro cis trans isomerase (LOC392352), mRI XM 373302 Homo sapiens similar to ORF2 (LOC392355), mRNA XM\_373303 Homo sapiens similar to Eukaryotic translation initiation factor 3 subunit 1 (el XM\_373304 Homo sapiens similar to Cathepsin L precursor (Major excreted protein) (MEI XM\_373305 Homo sapiens similar to chromosome 15 open reading frame 2 (LOC392364) XM\_373308 Homo sapiens similar to Olfactory receptor 1 3C2 (LOC392376), mRNA XM\_373309 Homo saplens similar to constitutive photomorphogenic protein (LOC392379 XM\_373310 Homo sapiens similar to large subunit riboso mal protein L36a (LOC392381). XM\_373311 Homo saplens similar to ribosomal protein L31 (LOC392382), mRNA XM\_373312 Homo sapiens similar to 60S ribosomal protein L32 (LOC392384), mRNA XM\_373313 Homo sapiens olfactory receptor, family 1, subfamily J, member 5 (OR1J5), r XM\_373314 Homo sapiens similar to G protein-coupled receptor homolog clone H8 (LOC XM 373315 Homo sapiens similar to Olfactory receptor 1 L6 (LOC392390), mRNA XM\_373316 Homo sapiens similar to Olfactory receptor 5C1 (Olfactory receptor 9-F) (OR: XM\_373317 Homo sapiens similar to Olfactory receptor 1 K1 (LOC392392), mRNA XM\_373319 Homo sapiens similar to hemicentin (LOC392395), mRNA XM\_373320 Homo sapiens similar to Von Ebners gland protein precursor (VEG protein) ( XM\_373322 Homo sapiens similar to Putative MUP-like li pocalin precursor (LOC392399). XM\_373324 Homo sapiens similar to Ankynn repeat domain protein 5 (LOC392404), mRt XM\_373325 Homo sapiens similar to Pim1 (LOC392405), mRNA XM\_373326 Homo sapiens similar to hypothetical protein (LOC392406), mRNA XM\_373327 Homo saplens similar to Glutamate [NMDA] receptor subunit zeta 1 precurso XM\_373328 Homo sapiens similar to hypothetical protein FLJ20433 (LOC392409), mRN/ XM\_373329 Homo sapiens similar to NADPH-dependent FMN and FAD containing exider XM\_373331 Homo sapiens similar to paranemin (LOC392411), mRNA XM\_373334 Homo saplens similar to MGC43306 protein (LOC392413), mRNA XM\_373335 Homo saplens similar to Phenylalanine-4-hydroxylase (PAH) (Phe-4-monoox XM\_373336 Homo sapiens similar to 1060P11.3 (killer Inhibitory receptor 2-2-2 (KIR222) XM\_373337 Homo sapiens similar to protein kinase C, zeta (LOC392420), mRNA XM\_373338 Homo saplens similar to bA92K2.2 (similar to ubiquitin) (LOC392425), mRNA XM 373339 Homo sapiens similar to Nucleolar phosphoprotein p130 (Nucleolar 130 kDa XM 373340 Homo sapiens similar to melanoma antigen, family B, 6 (LOC392433), mRNA XM\_373341 Homo sapiens similar to PR264/SC35 (LOC392439), mRNA XM\_373343 Homo saplens similar to 60S nbosomal protein L32 (LOC392447), mRNA XM\_373344 Homo sapiens similar to CpG binding protein (Protein containing PHD finger XM\_373345 Homo sapiens similar to synovial sarcoma, X breakpoint 6 (LOC392462), mF XM\_373347 Homo sapiens similar to RIKEN cDNA 2010001H14 (LOC392465), mRNA XM\_373348 Homo sapiens similar to melanoma antigen (LOC392466), mRNA XM\_373349 Homo sapiens similar to melanoma antigen, family B, 4; melanoma-associate XM\_373350 Homo sapiens similar to nuclear protein p30 (LOC392468), mRNA

XM 373351 Homo sapiens similar to dJ834A16.1 (similar to PGAM) (LOC392473), mRN/ XM\_373352 Homo sapiens similar to XAGE-5 protein (LO C392475), mRNA XM\_373353 Homo sapiens similar to Probable G protein-coupled receptor GPR83 precur-

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XM 373354 Homo sapiens similar to ribosomal protein L31 (LOC392487), mRNA XM 373355 Homo sapiens similar to Ras homolog gene family, member G (LOC392489) XM 373356 Homo sapiens similar to Translationally controlled tumor protein (TCTP) (p23 XM 373357 Homo sapiens LOC392491 (LOC392491), mRNA XM\_373358 Homo sapiens similar to hypothetical protein DKFZp761H079 isoform 1 (LOC XM\_373359 Homo sapiens similar to histone H2B-related protein (LOC392512), mRNA XM\_373362 Homo sapiens similar to dJ820B18.1 (similar to nuclear cap binding protein) XM 373365 Homo sapiens similar to Serine/threonine-protein kinase PRP4 homolog (PR XM 373366 Homo sapiens similar to beta-tubulin 1 (LOC392528), mRNA XM 373367 Homo sapiens similar to RIKEN cDNA 2900070E19 (LOC392531), mRNA XM 373368 Homo sapiens similar to Histone H3.3 (LOC392533), mRNA XM 373369 Homo sapiens similar to Heat shock cognate 71 kDa protein (LOC392535), r XM 373370 Homo sapiens similar to TJP4 protein (LOC392539), mRNA XM 373372 Homo sapiens similar to hypothetical protein FLJ20527 (LOC392546), mRN/ XM 373373 Homo sapiens similar to Glyceraldehyde 3-phosphate dehydrogenase, liver ( XM 373374 Homo sapiens similar to Ras-related protein Rab-28 (Rab-26) (LOC392551), XM 373378 Homo sapiens similar to hypothetical protein MGC15827 (LOC392559), mRN XM 373381 Homo sapiens H2A histone family, member B (H2AFB), mRNA XM 373382 Homo sapiens similar to neurofilament-like protein (LOC392563), mRNA XM 373384 Homo saplens similar to testis expressed sequence 13A (LOC392566), mRN XM\_373388 Homo sapiens similar to Menkes Disease (ATP7A) (LOC392570), mRNA XM\_373391 Homo saplens similar to Zinc finger protein ZFD25 (LOC392576), mRNA XM\_373395 Homo sapiens similar to testis specific protein, Y-linked (LOC392582), mRNA XM 373397 Homo sapiens similar to testis specific protein, Y-linked (LOC392584), mRN/ XM\_373398 Homo sapiens similar to Testis-Specific Protein Y (TSPY) (LOC392586), mR XM 373399 Homo saplens similar to Sedlin (Trafficking protein particle complex protein 2 XM 373407 Homo sapiens nuclear receptor subfamily 2, group F, member 6 (NR2F6), m XM 373413 Homo sapiens hypothetical protein FLJ20847 (FLJ20847), mRNA XM 373419 Homo sapiens valyl-tRNA synthetase 2-like (VARS2L), mRNA XM 373431 Homo saplens hypothetical protein BC004360 (LOC87769), mRNA XM 373433 Homo sapiens hypothetical protein BC002926 (LOC90379), mRNA XM 373440 Homo sapiens chondroitin sulfate synthase 3 (CSS3), mRNA XM 373444 Homo saplens LOC399709 (LOC387630), mRNA XM 373445 Homo saplens LOC399710 (LOC387631), mRNA XM 373446 Homo sapiens LOC399711 (LOC387632), mRNA XM 373447 Homo sapiens LOC399714 (LOC387633), mRNA XM 373448 Homo saplens LOC399722 (LOC387636), mRNA XM 373449 Homo sapiens LOC399724 (LOC387638), mRNA XM 373450 Homo sapiens LOC399725 (LOC387639), mRNA XM 373451 Homo sapiens hypothetical gene supported by AK056080; AL832706; BC014 XM 373452 Homo saplens LOC399735 (LOC387649), mRNA XM\_373453 Homo saplens LOC399741 (LOC387654), mRNA XM\_373454 Homo saplens LOC399743 (LOC387656), mRNA XM\_373456 Homo sapiens hypothetical gene supported by BX538120 (LOC387662), mR XM 373460 Homo sapiens LOC399764 (LOC387675), mRNA XM 373461 Homo sapiens LOC399775 (LOC387683), mRNA XM\_373463 Homo sapiens LOC399779 (LOC387686), mRNA XM 373464 Homo sapiens LOC399781 (LOC387687), mRNA XM 373465 Homo sapiens LOC399784 (LOC387689), mRNA XM 373466 Homo sapiens LOC399787 (LOC387690), mRNA XM 373468 Homo sapiens LOC399794 (LOC387697), mRNA XM 373469 Homo sapiens LOC399797 (LOC387701), mRNA XM 373470 Homo sapiens LOC399801 (LOC387705), mRNA XM 373471 Homo sapiens LOC399802 (LOC387706), mRNA XM\_373472 Homo sapiens LOC399805 (LOC387709), mRNA XM 373474 Homo sapiens LOC399808 (LOC387710), mRNA

XM 373475 Homo sapiens LOC399809 (LOC387711), mRNA

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XM 373477 Homo sapiens LOC399813 (LOC387715), mRNA
XM 373478 Homo sapiens LOC399817 (LOC387717), mRNA
XM 373479 Homo sapiens LOC399825 (LOC387722), mRNA
XM 373480 Homo sapiens LOC399828 (LOC387724), mRNA
XM 373481 Homo sapiens hypothetical gene supported by BC027847; BC047942 (LOC3
XM 373483 Homo sapiens LOC399847 (LOC387736), mRNA
XM 373484 Homo sapiens LOC399848 (LOC387737), mRNA
XM_373485 Homo sapiens LOC399849 (LOC387739), mRNA
XM_373486 Homo sapiens hypothetical gene supported by AK124823 (LOC387741), mR
XM_373487 Homo saplens hypothetical gene supported by AK124823 (LOC387742), mR
XM 373488 Homo sapiens LOC399854 (LOC387743), mRNA
XM 373489 Homo sapiens LOC399856 (LOC387746), mRNA
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XM 373492 Homo sapiens LOC399874 (LOC387757), mRNA
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XM 373502 Homo saplens LOC399902 (LOC387776), mRNA
XM 373503 Homo sapiens LOC399903 (LOC387777), mRNA
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XM 373506 Homo sapiens LOC399911 (LOC387784), mRNA
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XM 373538 Homo sapiens LOC400054 (LOC387869), mRNA
XM 373539 Homo sapiens LOC400057 (LOC387871), mRNA
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XM 373542 Homo sapiens LOC400062 (LOC387875), mRNA
XM 373543 Homo sapiens LOC400063 (LOC387876), mRNA
XM 373544 Homo sapiens hypothetical gene supported by AK056999: BC013920 (LOC3
XM 373545 Homo sapiens LOC400071 (LOC387883), mRNA
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XM 373548 Homo sapiens LOC400075 (LOC387886), mRNA
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XM 373557 Homo sapiens LOC400100 (LOC387901), mRNA
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XM_373559 Homo sapiens LOC400104 (LOC387905), mRNA
XM_373560 Homo sapiens LOC400107 (LOC387910), mRNA
XM_373561 Homo sapiens hypothetical gene supported by AK000246 (LOC387915), mR
XM 373562 Homo sapiens LOC400116 (LOC387917), mRNA
XM 373563 Homo saplens LOC400117 (LOC387918), mRNA
XM 373564 Homo sapiens LOC400133 (LOC387925), mRNA
XM 373566 Homo sapiens LOC400138 (LOC387931), mRNA
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XM_373585 Homo saplens LOC400198 (LOC387977), mRNA
XM 373587 Homo saplens LOC400202 (LOC387981), mRNA
XM 373588 Homo sapiens LOC400204 (LOC387983), mRNA
XM 373593 Homo sapiens LOC400215 (LOC387989), mRNA
XM_373594 Homo saplens LOC400220 (LOC387992), mRNA
XM_373595 Homo sapiens hypothetical gene supported by BC033546 (LOC387993), mR
XM_373596 Homo sapiens LOC400225 (LOC387994), mRNA
XM_373599 Homo sapiens LOC400232 (LOC388001), mRNA
XM 373600 Homo saplens LOC400233 (LOC388002), mRNA
XM 373601 Homo sapiens LOC400235 (LOC388003), mRNA
XM 373602 Homo sapiens LOC400240 (LOC388006), mRNA
XM 373603 Homo saplens chromosome 14 open reading frame 86 (C14orf86), mRNA
XM 373604 Homo sapiens hypothetical gene supported by BC019017 (LOC388009), mR
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XM 374764 Homo sapiens LOC393080 (LOC393080), mRNA XM\_374765 Homo sapiens similar to cDNA sequence BC016423 (LOC399712), mRNA XM\_374766 Homo sapiens hypothetical gene supported by AK128185 (LOC399715), mR XM\_374767 Homo sapiens similar to hypothetical protein (LOC399716), mRNA XM\_374768 Homo sapiens USP6 N-terminal like (USP6NL), mRNA XM\_374769 Homo sapiens similar to USP6NL protein (LOC399718), mRNA XM 374770 Homo sapiens similar to seven transmembrane helix receptor (LOC399719), XM\_374779 Homo sapiens ankyrin repeat domain 26 (ANKRD26), mRNA XM\_374781 Homo sapiens hypothetical protein LOC220906 (LOC220906), mRNA XM\_374782 Homo sapiens similar to supervillin isoform 2; membrane-associated F-actin XM\_374786 Homo saplens similar to hypothetical protein LOC349114 (LOC399744), mRI XM\_374787 Homo sapiens similar to hypothetical protein FLJ40432 (LOC399747), mRN/ XM\_374792 Homo sapiens similar to Hypothetical protein KIAA0514 (LOC399755), mRN. XM\_374799 Homo sapiens similar to ARF GTPase-activating protein (LOC399758), mRN XM\_374801 Homo sapiens similar to ARF GTPase-activating protein (LOC399761), mRN XM\_374802 Homo sapiens similar to DKFZP566K0524 protein (LOC399762), mRNA XM\_374803 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM\_374807 Homo sapiens similar to ARF GTPase-activating protein (LOC399769), mRN XM\_374809 Homo sapiens similar to activator of S phase kinase (LOC399777), mRNA XM\_374810 Homo sapiens similar to activator of S phase kinase (LOC399778), mRNA XM\_374813 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC3997 XM\_374817 Homo sapiens similar to bA182L21.1 (novel protein similar to hypothetical pr XM\_374829 Homo sapiens programmed cell death 11 (PDCD11), mRNA XM\_374830 Homo saplens similar to hypothetical protein LOC119395 (LOC399807), mRI XM 374831 Homo sapiens SH3 multiple domains 1 (SH3MD1), mRNA XM\_374832 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM 374835 Homo sapiens similar to RIKEN cDNA 1700022C21 (LOC399814), mRNA XM\_374836 Homo saplens similar to hypothetical protein FLJ13490 (LOC399815), mRN/ XM 374839 Homo sapiens similar to CG9643-PA (LOC399818), mRNA XM\_374840 Homo sapiens similar to CG15021-PA (LOC399819), mRNA XM\_374842 Homo sapiens hypothetical gene supported by AK094354 (LOC399821), mR XM 374844 Homo sapiens similar to hypothetical protein B130055A05 (LOC399823), mF XM 374847 Homo sapiens similar to shadow of prion protein; Shadoo (LOC399831), mR XM\_374851 Homo sapiens similar to Synaptotagmin XV (SytXV) (Chr10Syt) (LOC399837 XM\_374852 Homo sapiens similar to double homeobox protein (LOC399839), mRNA Homo sapiens similar to nuclear receptor coactivator 4; RET-activating gene XM 374854 XM\_374855 Homo sapiens similar to Glutamate dehydrogenase 1, mitochondrial precursi XM\_374857 Homo sapiens similar to bA476l15.3 (novel protein similar to septin) (LOC39) XM\_374858 Homo sapiens hypothetical gene supported by AK093729; AK128780; AL11; XM 374860 Homo saplens tumor protein p53 inducible protein 5 (TP53I5), mRNA XM\_374864 Homo sapiens hypothetical gene supported by AK091259 (LOC399857), mR XM\_374873 Homo sapiens similar to RIKEN cDNA 3830422K02 (LOC399870), mRNA XM\_374877 Homo sapiens hypothetical protein DKFZp779M0652 (DKFZp779M0652), ml XM\_374879 Homo sapiens hypothetical protein LOC114971 (LOC114971), mRNA XM\_374880 Homo sapiens hypothetical gene supported by BC065704 (LOC399888), mR XM\_374882 Homo sapiens similar to Metabotropic glutamate receptor 5 precursor (mGlul XM\_374885 Homo sapiens hypothetical gene supported by AK128188 (LOC399898), mR XM 374890 Homo sapiens hypothetical gene supported by AK093779 (LOC399900), mR XM\_374893 Homo sapiens LOC399904 (LOC399904), mRNA XM\_374898 Homo sapiens similar to pecanex-like 3 (LOC399909), mRNA XM\_374899 Homo sapiens similar to Gag-Pro-Pol protein (LOC399913), mRNA XM\_374900 Homo sapiens similar to beta-1,4-mannosyltransferase; beta-1,4 mannosyltra XM\_374902 Homo sapiens similar to polymerase (LOC399917), mRNA XM\_374904 Homo sapiens similar to SH3 and multiple anklyrin repeat domains protein 21 XM\_374905 Homo sapiens similar to proline rich synapse associated protein 1 isoform E; XM 374906 Homo sapiens hypothetical gene supported by AK124096 (LOC399923), mR

XM\_374907 Homo sapiens SH3 multiple domains 3 (SH3MD3), mRNA

XM 374909 Homo sapiens similar to hypothetical protein (LOC399925), mRNA XM 374911 Homo sapiens similar to ribosomal protein S12 (LOC399927), mRNA XM 374912 Homo sapiens X-ray radiation resistance associated 1 (XRRA1), mRNA XM 374915 Homo sapiens hypothetical protein LOC283219 (LOC283219), mRNA XM 374917 Homo sapiens similar to tripartite motif-containing 51 (LOC399937), mRNA XM 374919 Homo sapiens similar to tripartite motif protein 48; TRIM48 (LOC399939), mf XM 374920 Homo sapiens similar to tripartite motif-containing 51 (LOC399940), mRNA XM\_374922 Homo sapiens KIAA1731 protein (KIAA1731), mRNA XM 374927 Homo sapiens KIAA1377 protein (KIAA1377), mRNA XM\_374930 Homo sapiens similar to expressed sequence Al593442 (LOC399947), mRN XM\_374932 Homo sapiens hypothetical gene supported by AB096245 (LOC399948), mR XM 374933 Homo sapiens similar to RIKEN cDNA 4833427G06 (LOC399949), mRNA XM 374936 Homo sapiens KIAA1052 protein (KIAA1052), mRNA XM 374937 Homo sapiens hypothetical gene supported by AK127233 (LOC399957), mR XM 374944 Homo sapiens similar to LVLF3112 (LOC399967), mRNA XM 374945 Homo sapiens similar to Seminal vesicle protein 7 precursor (SVS VII) (Caltri XM 374948 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM 374949 Homo sapiens similar to Sorting nexin 19 (LOC399979), mRNA XM\_374952 Homo sapiens hypothetical gene supported by AK126822 (LOC399990), mR XM\_374959 Homo sapiens similar to DDX11 protein (LOC399999), mRNA XM\_374965 Homo sapiens similar to BC004636 protein (LOC400010), mRNA XM 374967 Homo sapiens similar to carboxyl-terminal modulator protein isoform a (LOC-XM 374972 Homo sapiens similar to MUC19 (LOC400023), mRNA XM\_374973 Homo saplens similar to hypothetical protein (L1H 3 region) - human (LOC40 XM 374976 Homo sapiens hypothetical protein LOC283331 (LOC283331), mRNA XM\_374981 Homo sapiens similar to DKFZP564K247 protein (LOC400038), mRNA XM\_374982 Homo sapiens similar to oriLyt TD-element binding protein 7 (LOC400040), n XM\_374983 Homo sapiens KIAA0748 gene product (KIAA0748), mRNA XM 374985 Homo sapiens KIAA0352 gene product (KIAA0352), mRNA XM 374987 Homo sapiens similar to 60S ribosomal protein L26 (LOC400055), mRNA XM 374989 Homo sapiens KIAA0373 gene product (KIAA0373), mRNA XM 374995 Homo sapiens similar to ribosomal protein L18a: 60S ribosomal protein L18a XM 374996 Homo sapiens AMP-activated protein kinase family member 5 (ARK5), mRN<sub>i</sub> XM\_374997 Homo sapiens hypothetical gene supported by AK097461; BC046185 (LOC4 XM\_374999 Homo sapiens hypothetical gene supported by AK124947 (LOC400077), mR XM\_375000 Homo sapiens KIAA1853 protein (KIAA1853), mRNA XM\_375004 Homo sapiens similar to Dynein heavy chain at 89D CG1842-PA (LOC40008 XM\_375005 Homo sapiens similar to Dynein heavy chain at 89D CG1842-PA (LOC40008 XM\_375007 Homo sapiens hypothetical gene supported by AK123815 (LOC400093), mR XM\_375013 Homo sapiens hypothetical gene supported by AK127292; AK128225 (LOC4 XM\_375018 Homo sapiens hypothetical gene supported by AK092066 (LOC400121), mR XM\_375023 Homo sapiens hypothetical gene supported by AJ412041 (LOC400132), mR XM\_375027 Homo sapiens hypothetical protein LOC283491 (LOC283491), mRNA XM 375029 Homo sapiens hypothetical protein LOC338862 (LOC338862), mRNA XM 375031 Homo saplens hypothetical gene supported by AK093158 (LOC400145), mR XM 375032 Homo sapiens TBC1 domain family, member 4 (TBC1D4), mRNA XM 375033 Homo sapiens hypothetical protein LOC144776 (LOC144776), mRNA XM\_375035 Homo sapiens similar to 40S ribosomal protein S26 (LOC400156), mRNA XM\_375038 Homo sapiens hypothetical gene supported by AK129953 (LOC400165), mR XM\_375039 Homo sapiens similar to LRRGT00052 (LOC400169), mRNA XM\_375041 Homo sapiens similar to CLL-associated antigen KW-1 splice variant 1 (LOC XM\_375042 Homo sapiens DKFZP434B061 protein (DKFZP434B061), mRNA XM 375045 Homo sapiens chromosome 14 open reading frame 92 (C14orf92), mRNA XM 375065 Homo sapiens zinc finger protein 409 (ZNF409), mRNA XM 375067 Homo sapiens similar to peroxisomal short-chain alcohol dehydrogenase; NA XM 375074 Homo sapiens KIAA0391 (KIAA0391), mRNA

XM\_375075 Homo sapiens similar to STELLA (LOC400206), mRNA

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XM\_375076 Homo sapiens hypothetical gene supported by AK124214 (LOC400207), mR XM 375077 Homo sapiens chromosome 14 open reading frame 25 (C14orf25), mRNA XM 375078 Homo sapiens similar to small acidic protein; small acidic protein sid2057p (L XM\_375080 Homo sapiens KIAA0831 (KIAA0831), mRNA XM 375081 Homo sapiens hypothetical gene supported by BX248296 (LOC400214), mR XM 375084 Homo sapiens similar to hypothetical protein (LOC400219), mRNA XM 375085 Homo sapiens KIAA1393 (KIAA1393), mRNA XM 375086 Homo sapiens zinc finger and BTB domain containing 1 (ZBTB1), mRNA XM 375087 Homo sapiens pleckstrin homology domain containing, family H (with MyTH4 XM 375088 Homo sapiens hypothetical gene supported by AK097098 (LOC400223), mR XM 375090 Homo sapiens similar to pleckstrin homology domain protein (5V327) (LOC4) XM 375099 Homo sapiens hypothetical protein LOC283585 (LOC283585), mRNA XM\_375101 Homo sapiens similar to RIKEN cDNA 0610010D24 (LOC400239), mRNA XM\_375105 Homo sapiens KIAA0329 (KIAA0329), mRNA XM\_375108 Homo sapiens similar to RIKEN cDNA A530016L24 gene (LOC400258), mRI XM\_375145 Homo sapiens similar to breast cancer antigen NY-BR-1 (LOC400296), mRN XM 375147 Homo sapiens similar to breast cancer anti-estrogen resistance 1: Crk-assoc XM 375148 Homo sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC/ XM 375150 Homo sapiens similar to protein kinase CHK2 isoform b: checkpoint-like protein XM 375152 Homo sapiens similar to hypothetical protein (LOC400304), mRNA XM 375153 Homo sapiens hypothetical protein DKFZp547L112 (DKFZP547L112), mRN/ XM 375154 Homo sapiens similar to KIAA0125 (LOC400309), mRNA XM\_375157 Homo sapiens similar to Ribosome biogenesis protein BMS1 homolog (LOC XM\_375163 Homo sapiens similar to hypothetical protein FLJ36144 (LOC400320), mRN/ XM\_375165 Homo sapiens hypothetical protein DKFZp434P162 (LOC390535), mRNA XM\_375170 Homo sapiens similar to KIAA1971 protein (LOC400336), mRNA XM 375171 Homo sapiens DKFZP434L187 protein (DKFZP434L187), mRNA XM 375174 Homo sapiens hypothetical gene supported by BC037839 (LOC400340), mR XM 375176 Homo sapiens similar to RIKEN cDNA 6530401L14 gene (LOC400342), mRI XM 375178 Homo saplens similar to hect domain and RLD 2 (LOC400344), mRNA XM 375179 Homo sapiens similar to hect domain and RLD 2 (LOC400345), mRNA XM\_375181 Homo sapiens KIAA1018 protein (KIAA1018), mRNA XM\_375183 Homo sapiens hypothetical gene supported by BC037839 (LOC400353), mR XM 375185 Homo sapiens formin (Ilmb deformity) (FMN), mRNA XM 375187 Homo sapiens nuclear protein in testis (NUT), mRNA XM 375190 Homo sapiens hypothetical gene supported by AK093014 (LOC400359), mR XM 375191 Homo sapiens hypothetical gene supported by BX647708 (LOC400360), mR XM 375196 Homo saplens similar to KIAA0377 gene product (LOC400367), mRNA XM\_375200 Homo sapiens similar to ubiquitin specific proteinase 50 (LOC400372), mRN XM\_375203 Homo sapiens hypothetical gene supported by AK126787 (LOC400376), mR XM 375207 Homo sapiens similar to RIKEN cDNA 1110004B15 (LOC400380), mRNA XM 375209 Homo saplens likely ortholog of mouse klotho lactase-phlorizin hydrolase rela XM\_375210 Homo sapiens similar to zinc finger and BTB domain containing 8; BTB/POZ XM 375224 Homo sapiens similar to cervical cancer suppressor-1 (LOC400410), mRNA XM 375226 Homo sapiens similar to FLJ40113 protein (LOC400414), mRNA XM 375228 Homo sapiens similar to RIKEN cDNA 3010021M21 (LOC400416), mRNA XM 375230 Homo sapiens similar to KIAA1920 protein (LOC400418), mRNA XM\_375235 Homo sapiens similar to hypothetical protein FLJ22795 (LOC400423), mRN/ XM 375239 Homo sapiens similar to KIAA1920 protein (LOC400428), mRNA XM 375240 Homo sapiens similar to hypothetical protein FLJ22795 (LOC400429), mRN/ XM\_375242 Homo sapiens similar to golgi autoantigen golgin subfamily a2-like (LOC4004 XM\_375243 Homo sapiens KIAA1920 protein (KIAA1920), mRNA XM\_375246 Homo sapiens similar to hypothetical protein DKFZp434I1020 (LOC400435), XM 375247 Homo sapiens KIAA0211 gene product (KIAA0211), mRNA

XM\_375248 Homo sapiens similar to KIAA1920 protein (LOC400436), mRNA
XM\_375249 Homo sapiens similar to hypothetical protein FLJ22795 (LOC400437), mRNA

XM 375252 Homo sapiens LOC400442 (LOC400442), mRNA

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XM 375260 Homo sapiens hypothetical gene supported by AK075564; BC060873 (LOC4 XM 375261 Homo sapiens similar to Nonhistone chromosomal protein HMG-14 (High-mc XM 375263 Homo sapiens similar to IFMQ9370 (LOC400454), mRNA XM 375266 Homo sapiens LOC400461 (LOC400461), mRNA XM 375268 Homo sapiens similar to RIKEN cDNA 3010021M21 (LOC400464), mRNA XM\_375269 Homo sapiens similar to Dynamin-1 (D100) (Dynamin, brain) (B-dynamin) (LI XM 375272 Homo sapiens similar to hypothetical protein FLJ36144 (LOC400468), mRN/ XM\_375274 Homo sapiens similar to solute carrier family 22 member 4; organic cation tra XM 375275 Homo sapiens similar to hypothetical protein FLJ22795 (LOC400472), mRN/ XM 375276 Homo sapiens similar to KIAA1920 protein (LOC400473), mRNA XM\_375277 Homo sapiens similar to FLJ40113 protein (LOC400477), mRNA XM\_375280 Homo sapiens similar to KIAA1920 protein (LOC400478), mRNA XM\_375282 Homo sapiens similar to DDX11 protein (LOC400479), mRNA XM\_375284 Homo sapiens similar to interleukin 9 receptor (LOC400481), mRNA XM 375288 Homo sapiens hypothetical protein MGC24381 (MGC24381), mRNA XM\_375292 Homo sapiens similar to hypothetical protein (LOC400492), mRNA XM\_375298 Homo sapiens KIAA1987 protein (KIAA1987), mRNA XM 375302 Homo sapiens hypothetical gene supported by AK126539 (LOC400499), mR XM 375305 Homo sapiens similar to TSG118.1 protein (LOC400506), mRNA XM 375306 Homo sapiens similar to hypothetical protein FLJ20581 (LOC400507), mRN/ XM 375307 Homo sapiens similar to hypothetical protein (LOC400508), mRNA XM 375308 Homo sapiens similar to FLJ12363 protein (LOC400509), mRNA XM\_375313 Homo sapiens hypothetical protein MGC9515 (MGC9515), mRNA XM 375316 Homo sapiens hypothetical protein LOC283887 (LOC283887), mRNA XM 375319 Homo sapiens similar to nuclear pore complex interacting protein (LOC4005' XM\_375320 Homo sapiens similar to apolipoprotein B48 receptor (LOC400514), mRNA XM\_375325 Homo sapiens similar to nuclear pore complex Interacting protein (LOC4005' XM 375330 Homo sapiens similar to MGC9515 protein (LOC400520), mRNA XM 375331 Homo sapiens similar to PI-3-kinase-related kinase SMG-1 isoform 1; lambda XM 375333 Homo sapiens hypothetical protein FLJ25404 (FLJ25404), mRNA XM 375334 Homo sapiens hypothetical protein LOC283901 (LOC283901), mRNA XM 375341 Homo sapiens similar to la heavy chain - human (fragment) (LOC400524), m XM 375344 Homo sapiens similar to hypothetical protein (LOC400526), mRNA XM\_375349 Homo sapiens similar to protein phosphatase 2A 48 kDa regulatory subunit is XM\_375351 Homo sapiens similar to KIAA1501 protein (LOC400529), mRNA XM 375352 Homo sapiens similar to KIAA1501 protein (LOC400530), mRNA XM 375353 Homo sapiens hypothetical protein LOC146481 (LOC146481), mRNA XM\_375355 Homo sapiens Nedd4 binding protein 1 (N4BP1), mRNA XM\_375357 Homo sapiens similar to hypothetical protein (LOC400537), mRNA XM\_375358 Homo sapiens hypothetical protein FLJ25339 (FLJ25339), mRNA XM 375359 Homo sapiens brain expressed, associated with Nedd4 (BEAN), mRNA XM 375360 Homo sapiens hypothetical gene supported by AK130753 (LOC400539), mR XM 375362 Homo saplens solute carrier family 7 (cationic amino acid transporter, y+ sys XM\_375363 Homo sapiens similar to PI-3-kinase-related kinase SMG-1 isoform 2; lambd: XM 375364 Homo sapiens similar to PI-3-kinase-related kinase SMG-1 isoform 2; lambdi XM\_375369 Homo sapiens similar to LHPE306 (LOC400546), mRNA XM\_375373 Homo sapiens similar to LOC93426 protein (LOC400547), mRNA XM\_375375 Homo saplens KIAA0431 protein (KIAA0431), mRNA XM\_375376 Homo sapiens KIAA0703 gene product (KIAA0703), mRNA XM\_375377 Homo sapiens KIAA0513 gene product (KIAA0513), mRNA XM\_375378 Homo sapiens similar to hypothetical protein (LOC400549), mRNA XM 375379 Homo sapiens hypothetical gene supported by AK127438 (LOC400555), mR XM 375383 Homo sapiens hypothetical gene supported by AK126695 (LOC400559), mR XM\_375384 Homo sapiens similar to AFG3(ATPase family gene 3)-like 1 (LOC400563), r XM 375386 Homo sapiens similar to bA476115.3 (novel protein similar to septin) (LOC40) XM 375387 Homo sapiens hypothetical gene supported by AK128660 (LOC400566), mR

XM 375392 Homo sapiens similar to HSPC296 (LOC400569), mRNA

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XM\_375397 Homo sapiens KIAA0753 gene product (KIAA0753), mRNA XM\_375399 Homo sapiens similar to DNA segment, Chr 11, Brigham & Womens Genetic XM\_375404 Homo sapiens hypothetical protein LOC146850 (LOC146850), mRNA XM\_375408 Homo sapiens KIAA0672 gene product (KIAA0672), mRNA XM\_375410 Homo saplens hypothetical gene supported by AK123100 (LOC400574), mR XM\_375412 Homo saplens hypothetical gene supported by AK127731 (LOC400576), mR XM\_375418 Homo sapiens similar to GRB2-related adaptor protein (LOC400581), mRNA XM\_375423 Homo sapiens similar to RIKEN cDNA 0610013E23 (LOC400585), mRNA XM 375424 Homo sapiens similar to stearoyl-CoA desaturase; acyl-CoA desaturase; fatt-XM\_375426 Homo sapiens similar to 60S ribosomal protein L21 (LOC400587), mRNA XM 375430 Homo sapiens hypothetical protein LOC201229 (LOC201229), mRNA XM\_375434 Homo sapiens similar to Very hypothetical protein (LOC400590), mRNA XM\_375436 Homo sapiens hypothetical gene supported by AK126768 (LOC400591), mR XM\_375438 Homo sapiens similar to Hypothetical protein KIAA0563 (LOC400594), mRN, XM\_375439 Homo sapiens similar to TBC1 domain family member 3 (Rab GTPase-active XM\_375443 Homo sapiens hypothetical protein LOC284100 (LOC284100), mRNA XM 375446 Homo sapiens hypothetical protein FLJ11822 (FLJ11822), mRNA XM\_375449 Homo sapiens hypothetical protein LOC284106 (LOC284106), mRNA XM\_375452 Homo sapiens similar to keratin associated protein 9.2 (LOC400596), mRNA XM 375453 Homo sapiens similar to RIKEN cDNA B830010L13 gene (LOC400597), mRI XM\_375456 Homo saplens hypothetical protein DKFZp761G2113 (DKFZp761G2113), mF XM 375469 Homo saplens ProSAPiP2 protein (ProSAPiP2), mRNA XM\_375471 Homo sapiens KIAA0924 protein (KIAA0924), mRNA XM\_375475 Homo saplens hypothetical gene supported by AK126318 (LOC400608), mR XM\_375478 Homo sapiens similar to RIKEN cDNA 1100001G20 (LOC400610), mRNA XM\_375482 Homo sapiens similar to U5 snRNP-specific protein, 200 kDa; U5 snRNP-spe XM\_375484 Homo sapiens similar to adapter protein 162 (LOC400615), mRNA XM\_375485 Homo sapiens helicase with zinc finger domain (HELZ), mRNA XM\_375491 Homo sapiens similar to FTO protein (LOC400622), mRNA XM\_375492 Homo sapiens similar to Ammd protein (LOC400625), mRNA XM\_375494 Homo sapiens hypothetical gene supported by AK127919 (LOC400627), mR XM 375495 Homo sapiens apoptosis-associated tyrosine kinase (AATK), mRNA XM\_375496 Homo sapiens similar to FLJ00403 protein (LOC400628), mRNA XM\_375500 Homo saplens similar to RIKEN cDNA 3110023B02 (MGC16597), mRNA XM\_375502 Homo sapiens similar to RIKEN cDNA 4921530G04 (LOC400629), mRNA XM\_375511 Homo sapiens similar to TBC1 domain family member 3 (Rab GTPase-active XM\_375514 Homo sapiens similar to pyrroline-5-carboxylate reductase 1 isoform 2; P5C XM\_375516 Homo sapiens hypothetical protein LOC284121 (LOC284121), mRNA XM\_375517 Homo sapiens similar to prolyl 4-hydroxylase, beta subunit; v-erb-a avian ery XM\_375520 Homo sapiens similar to HSPC214 (LOC400637), mRNA XM\_375527 Homo sapiens hypothetical protein LOC339290 (LOC339290), mRNA XM\_375537 Homo sapiens similar to thiopurine methyltransferase (LOC400650), mRNA XM\_375543 Homo sapiens similar to 40S ribosomal protein S3a (LOC400652), mRNA XM\_375544 Homo sapiens hypothetical gene supported by AK126293 (LOC400658), mR XM\_375545 Homo sapiens hypothetical gene supported by AK126829 (LOC400661), mR XM\_375548 Homo sapiens similar to bA476I15.3 (novel protein similar to septin) (LOC4DI XM\_375549 Homo sapiens similar to hypothetical protein LOC349114 (LOC400664), mRI XM\_375550 Homo sapiens similar to Protein Sck (LOC400665), mRNA XM\_375551 Homo sapiens hypothetical gene supported by AK127589 (LOC400666), mR XM 375552 Homo sapiens similar to GLGL782 (LOC400668), mRNA XM 375553 Homo sapiens KIAA0963 (KIAA0963), mRNA XM\_375557 Homo sapiens NY-REN-24 antigen (NY-REN-24), mRNA XM\_375558 Homo sapiens KIAA1881 (KIAA1881), mRNA XM\_375559 Homo sapiens scaffold attachment factor B2 (SAFB2), mRNA

XM\_375560 Homo sapiens similar to expressed sequence Al662250 (LOC400673), mRN XM\_375563 Homo sapiens hypothetical protein FLJ38149, mRNA XM\_375568 Homo sapiens ZFP-36 for a zinc finger protein (HSZFP36), mRNA

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XM 375569 Homo sapiens hypothetical protein DKFZp434I1610 (DKFZp434I1610), mRN XM 375575 Homo sapiens similar to hypothetical protein (LOC400677), mRNA XM 375583 Homo sapiens hypothetical gene supported by AK128109 (LOC400679), mR XM\_375589 Homo sapiens hypothetical gene supported by BC041864 (LOC400681), mR XM 375590 Homo sapiens similar to zinc finger protein 100; zinc finger protein 100 (Y1) ( XM 375593 Homo sapiens zinc finger protein 536 (ZNF536), mRNA XM\_375594 Homo sapiens zinc finger protein 507 (ZNF507), mRNA XM\_375599 Homo sapiens hypothetical protein FLJ21369 (FLJ21369), mRNA XM\_375602 Homo sapiens hypothetical gene supported by AK055260 (LOC400687), mR XM 375603 Homo sapiens similar to comment for location 3447-3655 BLASTX gil103290 XM 375604 Homo saplens similar to Hypothetical zinc finger protein KIAA1559 (LOC400) XM 375606 Homo sapiens hypothetical protein DKFZp779O175 (DKFZp779O175), mRN XM 375608 Homo sapiens similar to hypothetical protein (LOC400692), mRNA XM 375609 Homo sapiens similar to Hypothetical zinc finger protein KIAA0961 (LOC400) XM 375614 Homo sapiens similar to Placental protein 13-like (Charcot-Leyden crystal pro XM\_375618 Homo sapiens similar to pregnancy-specific beta-1 glycoprotein C1 - human XM\_375619 Homo sapiens similar to polycythemia rubra vera 1; cell surface receptor (LO XM 375629 Homo sapiens hypothetical gene DKFZp434J0226 (DKFZp434J0226), mRN/ XM 375631 Homo sapiens hypothetical gene supported by AK124070 (LOC400707), mR XM 375632 Homo saplens similar to Senne/threonine protein phosphatase 5 (PP5) (Prot

- XM 375633 Homo sapiens solute carrier family 8 (sodium-calcium exchanger), member 2 XM 375634 Homo sapiens similar to sialic acid binding Ig-like lectin 11; sialic acid-binding XM 375638 Homo sapiens similar to zinc finger protein 534; KRAB domain only 3 (LOC4) XM 375639 Homo sapiens similar to zinc finger protein KR-ZNF1 (LOC400714), mRNA
- XM\_375640 Homo sapiens similar to hypothetical protein MGC48625 (LOC400715), mRN XM 375646 Homo sapiens zinc finger protein 525 (ZNF525), mRNA
- XM 375651 Homo sapiens KIAA1115 (KIAA1115), mRNA

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- XM 375654 Homo sapiens hypothetical protein FLJ35258 (FLJ35258), mRNA XM 375655 Home sapiens similar to hypothetical protein A430110N23 (LOC400717), mF
- XM\_375656 Homo sapiens similar to hypothetical protein A430110N23 (LOC400718), mF XM\_375658 Homo sapiens hypothetical gene supported by AK123294 (LOC400719), mR
- XM 375660 Homo sapiens zinc finger protein 264 (ZNF264), mRNA
- XM 375663 Homo sapiens similar to hypothetical protein FLJ23506 (LOC400720), mRN/
- XM\_375664 Homo sapiens similar to KIAA2003 protein (LOC400721), mRNA XM\_375665 Homo saplens hypothetical protein BC012365 (LOC116412), mRNA
- XM\_375667 Homo sapiens similar to bA476l15.3 (novel protein similar to septin) (LOC40)
- XM\_375668 Homo sapiens hypothetical gene supported by AK093729; AK128780; BX64\* XM 375669 Homo sapiens similar to 60S ribosomal protein L23a (LOC400725), mRNA
- XM 375670 Homo saplens hypothetical gene supported by AK093729; BC062355; BX64\* XM 375671 Homo sapiens similar to bA476115.3 (novel protein similar to septin) (LOC40)
- XM 375678 Homo sapiens similar to KIAA1751 protein (LOC400731), mRNA
- XM 375681 Homo sapiens KIAA0495 (KIAA0495), mRNA
- XM\_375682 Homo saplens glycine-, glutamate-, thienylcyclohexylpiperidine-blnding prote XM 375684 Homo saplens halry and enhancer of split (Drosophila) homolog 2 (HES2), m
- XM\_375685 Homo sapiens KIAA0469 gene product (KIAA0469), mRNA
- XM\_375687 Homo sapiens similar to RIKEN cDNA F730108M23 gene (LOC400734), mR XM\_375688 Homo sapiens similar to hypothetical protein (LOC400736), mRNA
- XM 375690 Homo sapiens similar to RIKEN cDNA 9030409G11 (LOC400737), mRNA
- XM 375695 Homo sapiens hypothetical protein LOC126917 (LOC126917), mRNA
- XM 375696 Homo sapiens similar to ribosomal protein S14 (LOC400744), mRNA XM 375697 Homo sapiens KIAA0459 protein (KIAA0459), mRNA
- XM 375698 Homo sapiens hypothetical gene supported by AK124869 (LOC400745), mR
- XM 375700 Homo sapiens similar to Hypothetical protein BC005730 (LOC400746), mRN
- XM\_375707 Homo sapiens hypothetical gene supported by AK054768 (LOC400747), mR XM\_375712 Homo sapiens syndecan 3 (N-syndecan) (SDC3), mRNA
- XM 375713 Homo sapiens hypothetical protein LOC284551 (LOC284551), mRNA
- XM 375714 Homo sapiens similar to RIKEN cDNA 1700025K23 (LOC400749), mRNA

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- XM 375718 Homo sapiens inositol polyphosphate-5-phosphatase, 75kDa (INPP5B), mRt
- XM 375720 Homo sapiens regulating synaptic membrane exocytosis 3 (RIMS3), mRNA
- XM 375726 Homo sapiens KIAA0494 gene product (KIAA0494), mRNA XM 375729 Homo sapiens chromosome 1 open reading frame 34 (C1orf34), mRNA
- XM\_375732 Homo sapiens similar to Retrovirus-related Pol polyprotein from transposon 2
- XM 375737 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 6 (DNAJC6), m
- XM 375738 Homo sapiens hypothetical gene supported by BC047053 (LOC400757), mR
- XM\_375744 Homo sapiens hypothetical protein LOC339524 (LOC339524), mRNA
- XM\_375746 Homo sapiens similar to Interferon-induced guanylate-binding protein 1 (GTF
- XM 375747 Homo sapiens similar to Interferon-induced guanylate-binding protein 1 (GTF
- XM\_375753 Homo sapiens hypothetical gene supported by AK092728 (LOC400765), mR
- XM\_375754 Homo sapiens hypothetical protein LOC163404 (LOC163404), mRNA
- XM\_375756 Homo sapiens similar to Stromal cell derived factor receptor 2 (LOC400766),
- XM 375761 Homo saniens similar to Matrin 3 (LOC400767), mRNA

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- XM\_375762 Homo sapiens netrin G1 (NTNG1), mRNA XM 375770 Homo sapiens leucine-rich repeats and immunoglobulin-like domains 2 (LRK
- XM 375774 Homo saplens similar to hypothetical protein DKFZp434A171 (LOC400773), XM 375775 Homo sapiens similar to embigin (LOC400774), mRNA
- XM 375779 Homo sapiens similar to hypothetical protein AE2 (LOC400776), mRNA
- XM\_375783 Homo sapiens hypothetical protein LOC149013 (LOC149013), mRNA
- XM 375785 Homo sapiens similar to autoantigen La (LOC400779), mRNA
- XM 375802 Homo saplens hypothetical gene supported by BC014333 (LOC400784), mR
- XM 375803 Homo saplens similar to putative UST1-like organic anion transporter (LOC4) XM\_375806 Homo sapiens KIAA0476 gene product (KIAA0476), mRNA
- XM 375809 Homo sapiens hypothetical protein LOC126669 (LOC126669), mRNA
- XM\_375810 Homo sapiens similar to glucocerebrosidase (LOC400787), mRNA
- XM 375811 Homo sapiens similar to misato (LOC400788), mRNA
- XM 375812 Homo sapiens KIAA0907 protein (KIAA0907), mRNA
- XM 375814 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I
- XM 375816 Homo sapiens similar to Slamf7 protein (LOC400792), mRNA
- XM 375821 Homo saplens hypothetical gene supported by AK128015 (LOC400799), mR
- XM 375825 Homo sapiens kinesin family member 14 (KIF14), mRNA
- XM 375833 Homo sapiens hypothetical protein LOC284581 (LOC284581), mRNA
- XM\_375834 Homo sapiens inhibitor of kappa light polypeptide gene enhancer in B-cells, I
- XM\_375837 Homo sapiens KIAA0205 gene product (KIAA0205), mRNA
- XM 375838 Homo saplens hypothetical protein LOC128387 (LOC128387), mRNA
- XM 375841 Homo sapiens hypothetical gene supported by AK128488 (LOC400804), mR
- XM\_375842 Homo sapiens similar to hypothetical protein LOC349114 (LOC400805), mRI
- XM 375843 Homo saplens similar to hypothetical protein FLJ25976 (LOC400806), mRN/
- XM 375845 Homo sapiens similar to bA476I15.3 (novel protein similar to septin) (LOC40)
- XM 375846 Homo sapiens similar to hypothetical protein FLJ25976 (LOC400808), mRN/
- XM\_375848 Homo saplens KIAA0792 gene product (KIAA0792), mRNA
- XM 375849 Homo sapiens similar to Hypothetical protein CBG08611 (LOC400809), mRN
- XM\_375850 Homo sapiens similar to Ferritin heavy chain (Ferritin H subunit) (LOC400810
- XM 375851 Homo sapiens KIAA0133 gene product (KIAA0133), mRNA
- XM 375853 Homo sapiens protein BAP28 (FLJ10359), mRNA
- XM\_375856 Homo saplens similar to bA476I15.3 (novel protein similar to septin) (LOC40)
- XM\_375863 Homo saplens similar to 60S ribosomal protein L23a (LOC400814), mRNA
- XM\_375865 Homo sapiens similar to BC002216 protein (LOC400815), mRNA
- XM 375869 Homo sapiens similar to LOC375080 protein (LOC400818), mRNA XM 375873 Homo sapiens similar to KIAA0447 protein (LOC400820), mRNA
- XM 375875 Homo sapiens similar to hypothetical protein LOC349114 (LOC400821), mRI
- XM\_375876 Homo sapiens similar to hypothetical protein FLJ25976 (LOC400822), mRN/
- XM 375882 Homo sapiens similar to chromosome 14 open reading frame 24 (LOC40082
- XM 375885 Homo sapiens similar to C219-reactive peptide (LOC400824), mRNA
- XM 375887 Homo sapiens similar to Calcyclin (Prolactin receptor associated protein) (PF
- XM 375897 Homo sapiens similar to AG1 (LOC400826), mRNA

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XM 375899 Homo sapiens similar to Ba1-651 (LOC400827), mRNA XM 375902 Homo sapiens similar to beta-defensin 32 precursor (LOC400830), mRNA XM 375904 Homo sapiens similar to RIKEN cDNA 4933425020 (LOC400833), mRNA XM 375911 Homo sapiens KIAA0186 gene product (KIAA0186), mRNA XM 375912 Homo sapiens similar to hypothetical protein FLJ38374 (LOC400840), mRN/ XM\_375914 Homo sapiens similar to dJ1184F4.4 (novel protein similar to nucleolar protein XM 375917 Homo sapiens hypothetical protein LOC149692 (LOC149692), mRNA XM 375922 Homo sapiens similar to Protein C20orf85 (LOC400848), mRNA XM 375925 Homo sapiens similar to cyclin-like F-box (3A784) (LOC400854), mRNA XM 375928 Homo sapiens similar to hypothetical protein MGC30156 (LOC400855), mRN XM 375929 Homo sapiens hypothetical gene supported by AK123815 (LOC400856), mR XM\_375930 Homo sapiens similar to PRED3 (LOC400857), mRNA XM\_375931 Homo sapiens similar to PRED4 (LOC400858), mRNA XM 375934 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM 375935 Homo sapiens hypothetical protein LOC284825 (LOC284825), mRNA XM 375936 Homo sapiens chaperonin containing TCP1, subunit 8 (theta) (CCT8), mRNA XM\_375941 Homo sapiens hypothetical gene supported by AK127082 (LOC400867), mR XM\_375946 Homo sapiens hypothetical gene supported by AK124122 (LOC400878), mR XM\_375948 Homo sapiens similar to Serine/threonine-protein kinase Nek2 (NimA-related XM\_375951 Homo sapiens similar to Gene with similarity to rat kidney-specific (KS) gene XM 375953 Homo saplens hypothetical gene supported by AK129567; NM 201401 (LOC XM 375954 Homo sapiens similar to LOC284861 protein (LOC400887), mRNA XM 375955 Homo saplens similar to immunoglobulin superfamily, member 3; immunoglo XM 375958 Homo sapiens similar to proline dehydrogenase (oxidase) 1; proline oxidase XM 375963 Homo saplens similar to hypothetical protein LOC145497 (LOC400891), mRI XM\_375964 Homo sapiens similar to breakpoint cluster region isoform 1 (LOC400892), m XM\_375965 Homo saplens similar to Gamma-glutamyltranspeptidase 1 precursor (Gamm XM\_375966 Homo sapiens similar to immunoglobulin superfamily, member 3; immunoglo XM 375993 Homo sapiens similar to a putative protein with homology to a sequence betw XM 375996 Homo sapiens similar to Gamma-glutamyltransferase-like protein 4 (LOC400 XM\_375997 Homo sapiens similar to breakpoint cluster region isoform 1 (LOC400918), m XM 376001 Homo saplens similar to low density lipoprotein receptor-related protein 5; lox XM 376003 Homo saplens hypothetical gene supported by AK056895 (LOC400924), mR XM 376007 Homo sapiens KIAA0645 gene product (KIAA0645), mRNA XM 376008 Homo sapiens hypothetical protein LOC91464 (LOC91464), mRNA XM\_376010 Homo sapiens similar to TPTE and PTEN homologous inositol lipid phosphat XM\_376013 Homo saplens hypothetical protein LOC200321 (LOC200321), mRNA XM\_376018 Homo sapiens KIAA1644 protein (KIAA1644), mRNA XM\_376019 Homo sapiens similar to hypothetical protein (LOC400930), mRNA

XM\_376020 Homo sapiens hypothetical gene supported by AK130875 (LOC400931), mR XM\_376021 Homo sapiens hypothetical gene supported by AK128136 (LOC400932), mR

XM\_376022 Homo sapiens hypothetical gene supported by AK126356 (LOC400934), mR XM\_376023 Homo sapiens zinc finger, BED domain containing 4 (ZBED4), mRNA

XM 376024 Homo sapiens similar to interleukin 17 receptor E; EST AA589509 (LOC400\$ XM 376031 Homo sapiens hypothetical gene supported by AK123041 (LOC400940), mR

XM\_376032 Homo sapiens hypothetical gene supported by AK124409 (LOC400941), mR

XM\_376033 Homo sapiens hypothetical protein LOC339789 (LOC339789), mRNA. XM\_376034 Homo sapiens similar to AILT5830 (LOC400943), mRNA

XM\_376043 Homo sapiens similar to RIKEN cDNA 2310016E02 (LOC400948), mRNA XM 376044 Homo sapiens SPTF-associated factor 65 gamma (STAF65(gamma)), mRN/

XM 376048 Homo sapiens similar to FKSG60 (LOC400949), mRNA

XM 376049 Homo sapiens hypothetical gene supported by AK124893 (LOC400950), mR

XM 376051 Homo sapiens similar to NGNL6975 (LOC400952), mRNA XM 376056 Homo sapiens similar to echinoderm microtubule associated protein like 5 (L

XM\_376059 Homo sapiens SERTA domain containing 2 (SERTAD2), mRNA

XM\_376060 Homo sapiens KIAA0053 gene product (KIAA0053), mRNA

XM 376062 Homo sapiens similar to KIAA1155 protein (LOC400961), mRNA

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XM 376068 Homo sapiens similar to LP3727 (LOC400962), mRNA XM 376072 Homo sapiens hypothetical gene supported by AK098018 (LOC400965), mR XM 376073 Homo sapiens similar to lg kappa variable region (LOC400967), mRNA XM 376074 Homo sapiens LOC400968 (LOC400968), mRNA XM 376094 Homo sapiens hypothetical protein LOC90499 (LOC90499), mRNA XM\_376097 Homo sapiens similar to seven transmembrane helix receptor (LOC400984), XM\_376099 Homo sapiens similar to Glycerol-3-phosphate acyltransferase, mitochondria XM 376100 Homo sapiens similar to KIAA1641 protein (LOC400986), mRNA XM 376101 Homo sapiens similar to LOC375251 protein (LOC400987), mRNA XM 376106 Homo sapiens similar to RIKEN cDNA 6330578E17 (LOC400989), mRNA XM 376108 Homo sapiens similar to Sodium/hydrogen exchanger 4 (Na(+)/H(+) exchang XM 376111 Homo sapiens plasminogen-related protein A (LOC285189), mRNA XM 376112 Homo sapiens similar to RAN-binding protein 2-like 1 isoform 1: sperm meml XM 376117 Homo sapiens hypothetical gene supported by AK095987 (LOC400994), mR XM 376118 Homo sapiens hypothetical gene supported by AK095987 (LOC400996), mR XM\_376121 Homo sapiens hypothetical gene supported by AK095987 (LOC400998), mR XM\_376125 Homo sapiens similar to Single-stranded DNA-binding protein, isoform b (LO XM 376126 Homo saplens similar to hypothetical protein A230046P18 (LOC401003), mF XM 376127 Homo sapiens similar to pote protein: Expressed in prostate, ovary, testis, ar XM 376130 Homo sapiens similar to pote protein; Expressed in prostate, ovary, testis, ar XM 376139 Homo saplens hypothetical gene supported by AK123815 (LOC401011), mR XM 376141 Homo sapiens similar to zinc finger protein 285 (LOC401012), mRNA XM 376142 Homo sapiens hypothetical gene supported by AK057980; AK092189 (LOC4 XM 376144 Homo sapiens hypothetical protein LOC339745 (LOC339745), mRNA XM\_376148 Homo sapiens similar to RIKEN cDNA 5830415L20 (LOC401015), mRNA XM\_376150 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; \( \) XM 376154 Homo sapiens similar to ribosomal protein S15; rat insulinoma gene (LOC40) XM 376158 Homo sapiens hypothetical gene supported by AK126104; BX648733 (LOC4) XM 376160 Homo sapiens similar to CDNA sequence BC030440 (LOC401026), mRNA XM 376161 Homo sapiens similar to IIDS6411 (LOC401027), mRNA XM 376162 Homo sapiens similar to Nucleophosmin 1 (LOC401028), mRNA XM\_376165 Homo saplens similar to DAZ associated protein 2; deleted in azoospermia a XM\_376171 Homo sapiens KIAA1843 protein (KIAA1843), mRNA XM\_376172 Homo saplens zinc finger protein 142 (clone pHZ-49) (ZNF142), mRNA XM\_376178 Homo sapiens thyroid hormone receptor interactor 12 (TRIP12), mRNA XM\_376179 Homo saplens LOC401034 (LOC401034), mRNA XM\_376180 Homo sapiens similar to archease (LOC401035), mRNA XM 376185 Homo sapiens similar to ankyrin repeat and SOCS box-containing 18: SOCS XM 376186 Homo sapiens hypothetical protein LOC93463 (LOC93463), mRNA XM 376189 Homo sapiens DKFZP586K1520 protein (DKFZP586K1520), mRNA XM 376190 Homo sapiens hypothetical gene supported by AK125867 (LOC401039), mR XM 376191 Homo sapiens hypothetical gene supported by AK127861 (LOC401040), mR XM 376193 Homo sapiens FERM, RhoGEF and pleckstrin domain protein 2 (FARP2), ml XM 376195 Homo saplens hypothetical gene supported by AK123321 (LOC401045), mR XM\_376200 Homo sapiens similar to inhibitor of growth family, member 5 (LOC401047), I XM\_376201 Homo sapiens ER degradation enhancer, mannosidase alpha-like 1 (EDEM1 XM\_376203 Homo sapiens KIAA0218 gene product (KIAA0218), mRNA XM 376206 Homo sapiens hypothetical protein LOC285375 (LOC285375), mRNA XM 376207 Homo sapiens similar to FLJ00274 protein (LOC401054), mRNA XM 376209 Homo sapiens similar to Nonhistone chromosomal protein HMG-17 (High-mc XM 376212 Homo sapiens hypothetical protein LOC339862 (LOC339862), mRNA XM\_376225 Homo sapiens similar to serine protease-like 1 (LOC401063), mRNA XM 376227 Homo sapiens hypothetical gene supported by AK097724 (LOC401064), mR XM\_376232 Homo sapiens Vpr-binding protein (VprBP), mRNA XM\_376233 Homo sapiens similar to hypothetical protein MGC39725 (LOC401067), mRN

XM\_376238 Homo sapiens hypothetical protein LOC285331 (LOC285331), mRNA
XM\_376239 Homo sapiens similar to FtsJ homolog 2 isoform b; cell division protein FtsJ;

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XM\_376241 Homo sapiens hypothetical gene supported by AK125779 (LOC401070), mR XM 376243 Homo sapiens hypothetical gene supported by AK125942 (LOC401072), mR XM 376247 Homo sapiens similar to double homeobox protein (LOC401074), mRNA XM\_376248 Homo saplens similar to zinc finger protein 39 (LOC401075), mRNA XM 376249 Homo sapiens similar to CAP, adenylate cyclase-associated protein 1; adeny XM\_376254 Homo sapiens hypothetical protein DKFZp667G2110 (DKFZp667G2110), mF XM\_376256 Homo sapiens hypothetical gene supported by AK126064 (LOC401080), mR XM\_376257 Homo sapiens similar to hypothetical protein FLJ25976 (LOC401082), mRN/ XM\_376258 Homo sapiens similar to Nuclear transcription factor Y subunit beta (NF-Y pro XM\_376267 Homo sapiens similar to hypothetical protein, MNCb-4779 (LOC401087), mR XM\_376268 Homo sapiens hypothetical gene supported by AK127796 (LOC401088), mR XM\_376269 Homo sapiens hypothetical gene supported by AK125319 (LOC401089), mR XM\_376278 Homo sapiens similar to RIKEN cDNA 0610027B03 (LOC401095), mRNA XM\_376280 Homo sapiens hypothetical protein BC010062 (LOC152078), mRNA XM\_376281 Homo saplens hypothetical gene supported by BC031660 (LOC401097), mR XM\_376284 Homo sapiens hypothetical protein BC011266 (LOC93556), mRNA XM 376287 Homo sapiens hypothetical gene supported by AK128090 (LOC401100), mR XM\_376290 Homo sapiens hypothetical gene supported by AK124384 (LOC401105), mR XM 376292 Homo sapiens hypothetical gene supported by AK129507 (LOC401109), mR XM\_376299 Homo saplens hypothetical gene supported by AK093135 (LOC401114), mR XM\_376300 Homo sapiens hypothetical gene supported by AK124538 (LOC401116), mR XM 376301 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM\_376303 Homo saplens hypothetical protein LOC285484 (LOC285484), mRNA XM\_376305 Homo sapiens similar to deubiquitinating enzyme 3 (LOC401121), mRNA XM\_376306 Homo sapiens similar to hypothetical protein LOC169270 (LOC401122), mRI XM\_376307 Homo sapiens hypothetical protein DKFZp667E0512 (DKFZp667E0512), mF XM 376309 Homo sapiens hypothetical protein LOC285540 (LOC285540), mRNA XM 376310 Homo sapiens zinc finger, CCHC domain containing 4 (ZCCHC4), mRNA XM\_376312 Homo sapiens hypothetical gene supported by AK127623 (LOC401123), mR XM\_376314 Homo sapiens similar to TBC1 domain family member 1 (LOC401125), mRN XM\_376317 Homo sapiens similar to SNAG1 (LOC401130), mRNA XM\_376318 Homo sapiens similar to hypothetical protein FLJ30672 (LOC401132), mRN/ XM 376320 Homo saplens similar to RIKEN cDNA 9930019B18 gene (LOC401136), mRI XM\_376322 Homo sapiens similar to hypothetical protein (LOC401137), mRNA XM\_376323 Homo sapiens similar to RSTI689 (LOC401138), mRNA XM 376324 Homo sapiens similar to Ameloblastin precursor (LOC401139), mRNA XM 376325 Homo saplens hypothetical protein FLJ13105 (FLJ13105), mRNA XM\_376327 Homo saplens similar to hypothetical protein LOC231503 (LOC401141), mRI XM\_376328 Homo sapiens family with sequence similarity 13, member A1 (FAM13A1), m XM\_376331 Homo sapiens KIAA1680 protein (KIAA1680), mRNA XM\_376333 Homo saplens similar to elongation factor 1 alpha (LOC401146), mRNA XM\_376334 Homo sapiens similar to hypothetical protein (LOC401147), mRNA XM\_376338 Homo sapiens hypothetical gene supported by AK127273 (LOC401150), mR XM\_376339 Homo sapiens similar to RIKEN cDNA 1810037I17 (LOC401152), mRNA XM\_376342 Homo saplens similar to bA291L22.2 (similar to CDC10 (cell division cycle 10 XM\_376347 Homo sapiens hypothetical gene supported by AK126441 (LOC401157), mR XM 376348 Homo sapiens similar to hypothetical protein (L1H 3 region) - human (LOC40 XM 376349 Homo sapiens hypothetical protein LOC201725 (LOC201725), mRNA XM 376350 Homo sapiens PDZ domain containing guanine nucleoticle exchange factor ( XM\_376353 Homo sapiens similar to hypothetical protein FLJ20035 (LOC401160), mRN/ XM\_376354 Homo sapiens similar to unactive progesterone receptor, 23 kD; likely orthological controls and the control of the c XM\_376355 Homo sapiens KIAA0626 gene product (KIAA0626), mRNA XM\_376364 Homo sapiens hypothetical gene supported by AK126844 (LOC401166), mR XM\_376365 Homo saplens hypothetical protein BC014011 (LOC116349), mRNA XM\_376366 Homo sapiens DKFZP564I1171 protein (DKFZP564I1171), mRNA XM\_376368 Homo sapiens similar to Programmed cell death protein 6 (Probable calcium-XM\_376370 Homo sapiens hypothetical gene supported by AK090679 (LOC401172), mR

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XM 376371 Homo sapiens similar to hypothetical protein FLJ36144 (LOC401174), mRN/ XM 376372 Homo sapiens hypothetical protein LOC134121 (LOC134121), mRNA XM 376376 Homo sapiens similar to SMA3 protein (LOC401179), mRNA XM\_376379 Homo sapiens similar to RIKEN cDNA 4921505C17 (LOC401183), mRNA XM 376383 Homo sapiens similar to cAMP-specific phosphodiesterase PDE4D7 (LOC40 XM 376386 Homo sapiens similar to DNA segment, Chr 13, Brigharm & Womens Genetic XM 376387 Homo sapiens hypothetical gene supported by AK127903 (LOC401191), mR XM 376389 Homo sapiens similar to small EDRK-nich factor 1A, tellomeric; spinal muscul XM 376391 Homo sapiens similar to psi neuronal apoptosis inhibitory protein (LOC40119 XM\_376394 Homo sapiens hypothetical gene supported by AK130705 (LOC401195), mR XM 376395 Homo sapiens similar to POM121 membrane glycoprotein-like 1 (LOC40119) XM 376397 Homo sapiens hypothetical protein LOC153561 (LOC153561), mRNA XM\_376403 Homo sapiens similar to ribosomal protein L7-like 1 (LOC401197), mRNA XM\_376405 Homo sapiens Rho-guanine nucleotide exchange factor (RGNEF), mRNA XM\_376412 Homo sapiens similar to KIAA0825 protein (LOC4012O2), mRNA XM\_376413 Homo sapiens hypothetical protein DKFZp564C0469 (DKFZp564C0469), mF XM 376416 Homo sapiens similar to Beta-glucuronidase precursor (Beta-G1) (LOC40120 XM\_376419 Homo sapiens hypothetical protein LOC285638 (LOC285638), mRNA XM\_376420 Homo sapiens similar to 40S ribosomal protein S25 (LOC401206), mRNA XM\_376423 Homo sapiens hypothetical gene supported by AK126569 (LOC401207), mR XM 376427 Homo sapiens LOC401208 (LOC401208), mRNA XM\_376428 Homo sapiens similar to HYPOTHETICAL PROTEIN ORF-1137 (LOC40120) XM\_376430 Homo sapiens similar to nuclear receptor coactivator 4; RET-activating gene XM 376433 Homo sapiens hypothetical protein LOC153218 (LOC1 53218), mRNA XM\_376436 Homo sapiens hypothetical protein LOC134466 (LOC1 34466), mRNA XM\_376440 Homo sapiens hypothetical protein LOC285629 (LOC285629), mRNA XM\_376443 Homo sapiens hypothetical gene supported by AK097772 (LOC401217), mR XM\_376444 Homo sapiens hypothetical protein LOC133491 (LOC1 33491), mRNA XM 376447 Homo sapiens similar to hypothetical protein (LOC401221), mRNA XM\_376453 Homo sapiens similar to KIAA0752 protein (LOC401223), mRNA XM\_376454 Homo sapiens similar to acetoacetyl-CoA synthetase; acetoacetate-CoA liga XM\_376458 Homo sapiens hypothetical gene supported by AK093729; AK128780; BX64 XM\_376461 Homo sapiens similar to bA476115.3 (novel protein similar to septin) (LOC40 XM\_376463 Homo sapiens hypothetical protein MGC39372 (MGC39372), mRNA XM\_376464 Homo sapiens similar to HIV TAT specific factor 1; cofactor required for Tat a XM\_376469 Homo saplens hypothetical gene supported by AK026805 (LOC401236), mR XM 376471 Homo sapiens similar to chromosome 15 open reading frame 2 (LOC401238 XM\_376472 Homo sapiens similar to KIAA0319 (LOC401239), mRNA XM 376473 Homo sapiens similar to SMA3-like protein bA239L20.1 (LOC401240), mRN/ XM\_376474 Homo sapiens Integral membrane glycoprotein-like (LOC166994), mRNA XM 376479 Homo sapiens mediator of DNA damage checkpoint 1 (MDC1), mRNA XM\_376480 Homo sapiens hypothetical gene supported by AK098O12 (LOC401247), mR XM\_376486 Homo sapiens similar to coiled-coil domain 1 protein precursor (LOC401250) XM\_376487 Homo saplens similar to NG23 (LOC401251), mRNA XM\_376488 Homo sapiens hypothetical gene supported by AK123889 (LOC401252), mR XM\_376491 Homo sapiens hypothetical gene supported by AK125740 (LOC401253), mR XM\_376498 Homo sapiens similar to kinesin-related protein 3A (LOC401259), mRNA XM\_376499 Homo sapiens hypothetical gene supported by AK123643 (LOC401260), mR XM\_376503 Homo sapiens ectonucleotide pyrophosphatase/phosphodiesterase 4 (putati-XM\_376505 Homo sapiens similar to hypothetical protein FLJ30296 (LOC401263), mRNA XM 376508 Homo sapiens hypothetical gene supported by AK091177 (LOC401265), mR XM 376516 Homo sapiens myosin VI (MYO6), mRNA XM 376518 Homo sapiens chromosome 6 open reading frame 84 (C6orf84), mRNA XM\_376519 Homo sapiens ankyrin repeat domain 6 (ANKRD6), mRNA XM\_376522 Homo sapiens similar to Heat shock protein 67B2 (LOC401270), mRNA

XM\_376525 Homo sapiens zinc finger protein 450 (ZNF450), mRNA

XM\_376527 Homo sapiens hypothetical gene supported by AK124171 (LOC401271), mR

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XM 376532 Homo sapiens similar to KIAA0408 protein (LOC401272), mRNA XM 376533 Homo sapiens similar to FLJ44670 protein (LOC401273), mRNA XM\_376535 Homo sapiens chromosome 6 open reading frame 207 (C6orf207), mRNA XM\_376536 Homo sapiens similar to hypothetical protein (LOC401274), mRNA XM 376537 Homo sapiens BCL2-associated transcription factor 1 (BCLAF1), mRNA XM 376540 Homo sapiens chromosome 6 open reading frame 56 (C6orf56), mRNA XM\_376541 Homo sapiens hypothetical gene supported by AK126903 (LOC401278), mR XM\_376547 Homo sapiens RNA binding motif protein 16 (RBM16), mRNA XM\_376549 Homo saplens hypothetical gene supported by AK125637 (LOC401280), mR XM\_376550 Homo sapiens KIAA1423 (KIAA1423), mRNA XM\_376554 Homo sapiens similar to T-complex protein 10A homolog (LOC401285), mRN XM\_376555 Homo sapiens hypothetical gene supported by AK127120 (LOC401286), mR XM 376556 Homo sapiens chromosome 6 open reading frame 70 (C6orf70), mRNA XM 376557 Homo sapiens hypothetical gene supported by AK056013 (LOC401288), mR XM 376558 Homo sapiens hypothetical gene supported by AK127120 (LOC401293), mR XM\_376560 Homo sapiens hypothetical gene supported by AK125637 (LOC401295), mR XM\_376564 Homo sapiens unc-84 homolog A (C. elegans) (UNC84A), mRNA XM\_376565 Homo sapiens hypothetical gene supported by BC031661 (LOC401298), mR XM\_376566 Homo sapiens hypothetical protein LOC285924 (LOC285924), mRNA XM\_376567 Homo sapiens KIAA1856 protein (KIAA1856), mRNA XM\_376568 Homo sapiens hypothetical gene supported by AK125308 (LOC401300), mR XM 376569 Homo saplens hypothetical gene supported by AK123535 (LOC401302), mR XM 376571 Homo sapiens ubiquitin specific protease 42 (USP42), mRNA XM 376573 Homo sapiens similar to beta-1,4-manno-syltransferase; beta-1,4 manno-syltra XM\_376575 Homo sapiens hypothetical gene supported by AK027125 (LOC401307), mR XM\_376576 Homo saplens similar to Chain , Heat-Shock Cognate 70kd Protein (44kd Atr XM 376577 Homo sapiens similar to heat shock 70kDa protein 8 isoform 2; heat shock or XM\_376578 Homo sapiens PHD finger protein 14 (PHF14), mRNA XM\_376585 Homo sapiens similar to Dual specificity protein kinase CLK2 (CDC like kinas XM\_376586 Homo saplens similar to Hypothetical protein KIAA0087 (HA1002) (LOC4013 XM 376587 Homo sapiens similar to mKIAA0038 protein (LOC401316), mRNA XM\_376588 Homo sapiens KIAA0644 gene product (KIAA0644), mRNA XM 376589 Homo sapiens KIAA0241 protein (KIAA0241), mRNA XM\_376590 Homo sapiens LOC89231 (LOC89231), mRNA XM\_376591 Homo sapiens similar to KIAA0877 protein (LOC401322), mRNA XM\_376593 Homo sapiens similar to RIKEN cDNA 9330128H10 gene (LOC401323), mR XM\_376595 Homo sapiens hypothetical gene supported by AF447883 (LOC401325), mR XM\_376597 Homo saplens similar to sequence-specific single-stranded-DNA-binding pro XM\_376598 Homo sapiens similar to t-complex 1; T-complex locus TCP-1; t-complex 1 (a XM\_376600 Homo sapiens similar to RAS p21 protein activator 4; GTPase activating prot XM\_376602 Homo sapiens similar to Ras GTPase-activating protein 4 (RasGAP-activatin XM 376604 Homo saplens similar to cell division cycle 10 homolog (LOC401332), mRNA XM\_376605 Homo sapiens similar to hypothetical protein FLJ25976 (LOC401333), mRN/ XM\_376607 Homo sapiens hypothetical gene supported by AK126096 (LOC401335), mR XM\_376609 Homo sapiens growth factor receptor-bound protein 10 (GRB10), mRNA XM\_376610 Homo saplens hypothetical gene supported by AK097404; NM 198284 (LOC XM\_376611 Homo sapiens hypothetical gene supported by AK127870 (LOC401337), mR XM\_376612 Homo sapiens similar to SMT3 suppressor of mlf two 3 homolog 2 (LOC4013 XM\_376613 Homo sapiens similar to hypothetical protein DKFZp434F142 (LOC401341), XM\_376614 Homo sapiens LOC401350 (LOC401350), mRNA XM\_376615 Homo sapiens hypothetical gene supported by BC040831 (LOC401351), mR XM\_376616 Homo sapiens hypothetical gene supported by BC040831 (LOC401354), mR XM\_376617 Homo sapiens similar to BC060615 protein (LOC401355), mRNA XM\_376618 Homo sapiens similar to CAGL79 (LOC401356), mRNA XM\_376619 Homo sapiens similar to hypothetical protein LOC285908 (LOC401357), mRI

XM\_376621 Homo sapiens similar to hypothetical protein FLJ25037 (LOC401360), mRN/
 XM\_376622 Homo sapiens similar to hypothetical protein MGC16733 similar to CG12113

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XM 376623 Homo sapiens similar to MGC16733 protein (LOC401362), mRNA XM\_376625 Homo sapiens similar to hypothetical protein FLJ10900 (LOC401369), mRN/ XM\_376626 Homo sapiens similar to Williams Beuren syndrome chromosome region 19 i XM\_376628 Homo sapiens similar to Neutrophil cytosol factor 1 (NCF-1) (Neutrophil NAD XM 376629 Homo sapiens similar to transcription factor GTF2IRD2 (LOC401375), mRNA XM 376630 Homo sapiens similar to Nuclear envelope pore membrane protein POM 121 XM 376631 Homo sapiens Williams Beuren syndrome chromosome region 24 (WBSCR) XM 376636 Homo sapiens similar to PMS4 (LOC401378), mRNA XM 376638 Homo sapiens similar to PMS4 (LOC401379), mRNA XM\_376639 Homo sapiens similar to Williams Beuren syndrome chromosome region 19 i XM\_376640 Homo sapiens similar to PMS4 homolog mismatch repair protein - human (Lt XM 376642 Homo sapiens tripartite motif-containing 50B (TRIM50B), mRNA XM\_376643 Homo sapiens similar to hypothetical protein LOC285908 (LOC401383), mRI XM\_376647 Homo sapiens sema domain, immunoglobulin domain (Ig), short basic doma XM\_376648 Homo sapiens similar to hypothetical protein 4932412H11 (LOC401387), mF XM\_376649 Homo saplens hypothetical protein FLJ39885 (FLJ39885), mRNA XM 376651 Homo sapiens hypothetical gene supported by AK124274 (LOC401388), mR XM 376652 Homo sapiens distal-less homeo box 6 (DLX6), mRNA XM\_376653 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM 376655 Homo sapiens similar to importin alpha 1b (LOC401391), mRNA XM 376656 Homo sapiens hypothetical protein FLJ22037 (FLJ22037), mRNA XM\_376657 Homo sapiens hypothetical protein LOC285989 (LOC285989), mRNA XM\_376658 Homo sapiens similar to Zinc-alpha-2-glycoprotein precursor (Zn-alpha-2-gly XM\_376663 Homo sapiens similar to reverse transcriptase related protein (LOC401395), XM\_376664 Homo sapiens KIAA1218 protein (KIAA1218), mRNA XM\_376665 Homo saplens hypothetical protein LOC286009 (LOC286009), mRNA XM\_376668 Homo sapiens similar to Serine/threonine-protein kinase tousled-like 2 (Tous XM\_376670 Homo saplens similar to hypothetical protein FLJ25976 (LOC401402), mRN/ XM\_376671 Homo sapiens coatomer protein complex, subunit gamma 2 (COPG2), mRN/ XM 376672 Homo saplens similar to ribosomal protein S14 (LOC401404), mRNA XM 376677 Homo sapiens hypothetical protein LOC155006 (LOC155006), mRNA XM\_376679 Homo saplens hypothetical protein FLJ25778 (FLJ25778), mRNA XM\_376680 Homo sapiens KIAA1718 protein (KIAA1718), mRNA XM\_376681 Homo sapiens similar to RAB19, member RAS oncogene family (LOC40140) XM\_376683 Homo sapiens LCHN protein (LCHN), mRNA XM\_376684 Homo saplens hypothetical protein LOC93432 (LOC93432), mRNA XM\_376707 Homo sapiens similar to KIAA0738 protein (LOC401426), mRNA XM 376712 Homo saplens FLJ43692 protein (FLJ43692), mRNA XM\_376713 Homo sapiens similar to Olfactory receptor 2A7 (LOC401427), mRNA XM\_376715 Homo sapiens similar to seven transmembrane helix receptor (LOC401428), XM\_376716 Homo sapiens similar to KIAA1285 protein (LOC401429), mRNA XM 376717 Homo sapiens likely ortholog of mouse zinc finger protein EZI (EZI), mRNA XM\_376718 Homo sapiens FLJ45737 protein (FLJ45737), mRNA XM 376719 Homo saplens similar to KIAA2036 protein (LOC401430), mRNA XM 376720 Homo saplens KIAA0543 protein (KIAA0543), mRNA XM 376722 Homo sapiens hypothetical protein LOC155036 (LOC155036), mRNA XM\_376724 Homo sapiens KIAA1402 protein (CSGIcA-T), mRNA XM\_376725 Homo sapiens hypothetical gene supported by AK127717 (LOC401433), mR XM 376727 Homo sapiens hypothetical protein LOC285888 (LOC285888), mRNA XM 376728 Homo sapiens hypothetical protein LOC155435 (LOC155435), mRNA XM\_376730 Homo sapiens ubiquitin-protein isopeptide ligase (E3) (KIAA0010), mRNA XM\_376736 Homo sapiens similar to Hypothetical protein KIAA0711 (LOC401444), mRN<sub>i</sub> XM\_376741 Homo sapiens similar to ubiquitin-specific protease 17-like protein (LOC4014 XM\_376746 Homo sapiens similar to seven transmembrane helix receptor (LOC401450),

XM\_376750 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM\_376754 Homo sapiens similar to deubiquitinating enzyme 3 (LO-401453), MAX XM\_376756 Homo sapiens similar to hypothetical protein SB153 isoform 1 (LO-401454).

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XM 376757 Homo sagiens similar to KIAA1456 protein (LOC401455), mRNA XM\_376761 Homo sapiens hypothetical gene supported by BC062364; BX647289 (LOC4 XM 376763 Homo sapiens similar to TRANSCRIPTION FACTOR COE2 (EARLY B-CELL XM 376764 Homo sapiens paraneoplastic antigen MA2 (PNMA2), mRNA XM\_376771 Homo sapiens hypothetical gene supported by AK128232 (LOC401459), mR XM 376774 Homo sapiens similar to hypothetical protein 4932417K07 (LOC401460), mF

XM\_376776 Homo sapiens thymus high mobility group box protein TOX (TOX), mRNA XM\_376780 Homo sapiens similar to Myelin P2 protein (LOC401465), mRNA

XM 376781 Homo sapiens solute carrier family 10 (sodium/bile acid cotransporter family)

XM 376783 Homo sapiens hypothetical gene supported by BC055092 (LOC401466), mR XM 376784 Homo sapiens similar to prot GOR (LOC401467), mRNA

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XM\_376785 Homo sapiens similar to NFS1 nitrogen fixation 1 isoform b precursor; cystell XM\_376786 Homo sapiens similar to Ceruloplasmin precursor (Ferroxidase) (LOC401469

XM\_376787 Homo sapiens similar to 40S ribosomal protein S26 (LOC401470), mRNA

XM 376791 Homo sapiens hypothetical gene supported by AK127183 (LOC401472), mR XM\_376793 Homo sapiens similar to RIKEN cDNA A830094I09 gene (LOC401474), mRN XM\_376795 Homo sapiens hypothetical gene supported by AK127771 (LOC401478), mR

XM\_376797 Homo sapiens similar to KIAA0870 protein (LOC401479), mRNA XM 376800 Homo sapiens similar to Hypothetical zinc finger protein KIAA0628 (LOC401-

XM 376801 Homo sapiens hypothetical gene supported by AK091211; AK125852 (LOC4 XM 376809 Homo sapiens similar to bA110H4.2 (similar to membrane protein) (LOC4014

XM 376810 Homo sapiens similar to dJ28I24.1.2 (Spinal Muscular Atrophy region (SMA3 XM 376814 Homo saplens similar to DDX11 protein (LOC401487), mRNA

XM\_376819 Homo sapiens similar to RIKEN cDNA 4933428103 (LOC401494), mRNA XM\_376821 Homo sapiens chromosome 9 open reading frame 14 (C9orf14), mRNA

XM\_376822 Homo sapiens similar to PRO2738 (LOC401497), mRNA XM 376824 Homo saplens similar to RIKEN cDNA A930001M12 gene (LOC401498), mF

XM 376829 Homo sapiens hypothetical protein LOC158381 (LOC158381), mRNA

XM 376830 Homo sapiens KIAA0258 (KIAA0258), mRNA

XM 376833 Homo sapiens LOC401505 (LOC401505), mRNA

XM 376838 Homo saplens hypothetical gene supported by AK127145 (LOC401507), mR XM 376840 Homo sapiens hypothetical gene supported by AK127145 (LOC401508), mR

XM 376841 Homo saplens similar to DKFZP572C163 protein (LOC401509), mRNA

XM 376843 Homo sapiens similar to LOC286286 protein (LOC401510), mRNA

XM 376846 Homo saplens similar to DKFZP572C163 protein (LOC401511), mRNA XM\_376847 Homo sapiens hypothetical gene supported by AK124538 (LOC401512), mR

XM\_376848 Homo sapiens hypothetical gene supported by AK124538 (LOC401514), mR XM 376850 Homo sapiens hypothetical gene supported by AK124122 (LOC401515), mR XM 376852 Homo sapiens similar to bA251O17.3 (similar to aquaporin 7) (LOC401516),

XM 376855 Homo sapiens similar to keratinocyte growth factor-like protein, group III - hu XM 376858 Homo saplens similar to breast cancer antigen NY-BR-1 (LOC401519), mRN

XM\_376861 Homo sapiens LOC401520 (LOC401520), mRNA XM 376863 Homo sapiens similar to Keratinocyte growth factor precursor (KGF) (Flbroble XM 376866 Homo sapiens similar to bA251O17.3 (similar to aquaponn 7) (LOC401524),

XM 376869 Homo sapiens similar to tumor suppressor deleted in oral cancer-related 1 (L

XM 376872 Homo sapiens LOC401529 (LOC401529), mRNA XM\_376874 Homo sapiens chromosome 9 open reading frame 71 (C9orf71), mRNA

XM\_376876 Homo sapiens similar to coiled-coil-helix-coiled-coil-helix domain containing : XM\_376880 Homo sapiens hypothetical gene supported by AK127390 (LOC401534), mR

XM\_376885 Homo sapiens hypothetical gene supported by AK127445 (LOC401535), mR XM\_376888 Homo sapiens similar to Laminin receptor 1 (LOC401537), mRNA

XM\_376890 Homo sapiens similar to CG14980-PB (LOC375601), mRNA

XM 376892 Homo sapiens similar to hypothetical protein (LOC401541), mRNA

XM 376895 Homo sapiens zinc finger protein 510 (ZNF510), mRNA

XM 376898 Homo sapiens thioredoxin domain containing 4 (endoplasmic reticulum) (TXI XM 376899 Homo sapiens similar to RIKEN cDNA D630039A03 gene (LOC401546), mR

XM\_376900 Homo sapiens similar to KIAA0563 gene product (LOC401547), mRNA

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XM 376903 Homo sapiens KIAA0674 protein (KIAA0674), mRNA

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XM 376905 Homo sapiens EGF-like-domain, multiple 5 (EGFL5), mRNA

XM 376902 Homo sapiens similar to RIKEN cDNA 4732481H14 (LOC401548), mRNA XM 376909 Homo sapiens similar to hypothetical protein FLJ25955 (LOC401551), mRN/ XM 376917 Homo sapiens far upstream element (FUSE) binding protein 3 (FUBP3), mRI

XM 376921 Homo saniens hypothetical protein MGC43306 (MGC43306), mRNA

XM 376924 Homo sapiens chromosome 9 open reading frame 62 (C9orf62), mRNA XM 376925 Homo sapiens similar to DNL zinc finger (3D41) (LOC401560), mRNA

XM\_376930 Homo sapiens hypothetical gene supported by AK127160 (LOC401562), mR

XM\_376931 Homo sapiens hypothetical gene supported by AK093587; AK124899 (LOC4

XM 376939 Homo sapiens similar to 4931415M17 protein (LOC401565), mRNA XM 376947 Homo sapiens similar to surfeit 5 isoform b; surfeit locus protein 5 (LOC4015

XM 376949 Homo saplens similar to Surfeit locus protein 4 (LOC401567), mRNA

XM 376950 Homo sapiens similar to MGC43306 protein (LOC401568), mRNA XM 376960 Homo sapiens similar to RIKEN cDNA 2900002H16 (LOC401569), mRNA

XM 376965 Homo sapiens LOC401570 (LOC401570), mRNA

XM 376968 Homo sapiens hypothetical gene supported by AK124122 (LOC401572), mR

XM 376978 Homo sapiens similar to hypothetical protein FLJ33610 (LOC401576), mRN/ XM\_376981 Homo saplens similar to hypothetical protein (L1H 3 region) - human (LOC4C

XM\_376986 Homo sapiens similar to Syntenin 1 (Syndecan binding protein 1) (Melanoma XM 376989 Homo sapiens similar to dJ54B20.4 (novel KRAB box containing C2H2 type:

XM\_377000 Homo sapiens hypothetical gene supported by AK096379 (LOC401589), mR XM\_377002 Homo sapiens hypothetical gene supported by AK096379 (LOC401590), mR

XM\_377012 Homo sapiens similar to Spindlin-like protein 2 (SPIN-2) (LOC401591), mRN XM 377014 Homo sapiens Cdc42 quanine nucleotide exchange factor (GEF) 9 (ARHGEF

XM 377018 Homo sapiens LOC401594 (LOC401594), mRNA XM 377019 Homo saplens LOC401595 (LOC401595), mRNA

XM 377024 Homo sapiens similar to adaptor-related protein complex 2, beta 1 subunit; a

XM 377025 Home saniens similar to adapter-related protein complex 2, beta 1 subunit; b XM 377026 Home sapiens similar to adapter-related protein complex 2, beta 1 subunit b

XM\_377027 Homo saplens similar to heat shock 70kD protein binding protein; progestero XM\_377028 Homo sapiens similar to histone acetyltransferase (LOC401606), mRNA

XM 377031 Homo sapiens similar to nuclear RNA export factor 2; TAP like protein 2 (LOC

XM 377032 Homo sapiens G protein-coupled receptor-associated sorting protein (GASP) XM\_377033 Homo sapiens similar to STELLA (LOC401611), mRNA

XM 377034 Homo sapiens similar to mitochondrial carrier triple repeat 1 (LOC401612), π XM 377041 Homo sapiens similar to hypothetical protein MGC15416 (LOC401618), mRN

XM 377053 Homo sapiens hypothetical gene supported by BC040297 (LOC401619), mR XM 377060 Homo sapiens hypothetical protein LOC203547 (LOC203547), mRNA

XM\_377062 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM 377071 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I

XM 377072 Homo sapiens similar to LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (I XM 377073 Homo sapiens similar to CXYorf1-related protein (LOC401624), mRNA

XM\_377076 Homo sapiens hypothetical gene supported by AK097803; BC017239 (LOC4 XM\_377087 Homo sapiens similar to hypothetical protein FLJ33610 (LOC401627), mRN/

XM 377097 Homo sapiens similar to RNA binding motif protein, Y-linked, family 1 (LOC4) XM\_377098 Homo sapiens similar to Transcript Y 6 protein (LOC401633), mRNA

XM 377102 Homo sapiens LOC401634 (LOC401634), mRNA

XM 377104 Homo sapiens LOC401635 (LOC401635), mRNA

XM\_377109 Homo sapiens similar to 40S ribosomal protein SA (P40) (34/67 kDa laminin XM 377110 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC4016

XM 377115 Homo sapiens similar to PRED65 (LOC401641), mRNA

XM\_377117 Homo sapiens similar to bA182L21.1 (novel protein similar to hypothetical pri XM 377122 Homo sapiens similar to Guanine nucleotide-binding protein G(i), alpha-2 sul

XM\_377129 Homo sapiens similar to golgi autoantigen, golgin subfamily a, 7 (LOC40164) XM 377133 Homo sapiens similar to deleted in malignant brain tumors 1; crp-ductin; vom

XM\_377136 Homo sapiens similar to double homeobox protein (LOC401650), mRNA

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XM 377137 Homo saniens similar to double homeobox protein (LOC401651), mRNA XM 377140 Homo sapiens similar to double homeobox protein (LOC401652), mRNA XM 377142 Homo sapiens similar to double homeobox protein (LOC401653), mRNA XM 377143 Homo saplens similar to double homeobox protein (LOC401654), mRNA XM\_377147 Homo sapiens similar to RIKEN cDNA 1500011L16 (LOC401660), mRNA XM\_377154 Homo sapiens similar to seven transmembrane helix receptor (LOC401661), XM\_377155 Homo sapiens similar to Olfactory receptor 51H1 (LOC401663), mRNA XM\_377156 Homo sapiens similar to Olfactory receptor 51T1 (LOC401665), mRNA XM\_377158 Homo sapiens similar to Olfactory receptor 51A4 (LOC401666), mRNA XM 377159 Homo sapiens similar to Olfactory receptor 51A2 (LOC401667), mRNA XM 377179 Homo sapiens similar to seven transmembrane helix receptor (LOC401675). XM 377185 Homo sapiens similar to filamin-binding LIM protein-1; migfilin (LOC401679). XM 377189 Homo sapiens similar to Metabotropic glutamate receptor 5 precursor (mGlul XM 377200 Homo sapiens similar to seven transmembrane helix receptor (LOC401687). XM 377218 Homo sapiens similar to MGC15937 protein (LOC401694), mRNA XM\_377222 Homo sapiens similar to seven transmembrane helix receptor (LOC401696). XM\_377230 Homo sapiens similar to U2af1 protein (LOC401703), mRNA XM\_377231 Homo sapiens similar to heterogeneous nuclear ribonucleoprotein C isoform XM\_377240 Homo saplens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC4017 XM\_377259 Homo saplens similar to S-phase kinase-associated protein 1A isoform a; or XM\_377262 Homo sapiens similar to Hypothetical protein CBG01854 (LOC401716), mRN XM\_377265 Homo sapiens similar to fidgetin (LOC401720), mRNA XM\_377278 Homo saplens similar to ribosomal protein L6 (LOC401725), mRNA XM 377283 Homo sapiens similar to Heat shock cognate 71 kDa protein (LOC401726), r XM 377285 Homo sapiens similar to 60S ribosomal protein L11 (LOC401727), mRNA XM\_377287 Homo sapiens similar to MAL13P1.296 (LOC401728), mRNA XM 377296 Homo sapiens similar to Hypothetical protein CBG23155 (LOC401732), mRN XM\_377305 Homo saplens similar to Hypothetical protein CBG01089 (LOC401740), mRN XM 377306 Homo sapiens similar to vav-1 interacting Kruppel-like protein isoform b (LOC XM\_377337 Homo sapiens similar to cerebellin (LOC401766), mRNA XM\_377338 Homo saplens KIAA0323 (KIAA0323), mRNA XM\_377343 Homo saplens similar to hypothetical protein DJ667H12.2 (LOC401778), mR XM 377355 Homo sapiens KIAA0602 protein (KIAA0602), mRNA XM\_377369 Homo sapiens similar to hypothetical protein FLJ36144 (LOC401806), mRN/ XM 377374 Homo saplens similar to hypothetical protein FLJ36144 (LOC401808), mRN/ XM\_377376 Homo sapiens similar to hypothetical protein FLJ36144 (LOC401811), mRN/ XM\_377377 Homo saplens similar to LRRGT00052 (LOC401812), mRNA XM\_377383 Homo sapiens similar to stereocilin (LOC401815), mRNA XM\_377388 Homo saplens similar to antigen Cs44 (LOC401819), mRNA XM\_377390 Homo sapiens similar to LOC375757 protein (LOC401820), mRNA XM 377394 Homo sapiens similar to melanoma chondroitin sulfate proteoglycan (LOC40) XM 377395 Homo sapiens similar to MKI67 (FHA domain) interacting nucleolar phosphol XM 377407 Homo sapiens similar to hypothetical protein 4732467B22 (LOC401827), mR XM\_377408 Homo sapiens similar to mast cell protease-11 (LOC401828), mRNA XM 377412 Homo sapiens similar to 3-phosphoinositide dependent protein kinase-1 (hPI XM 377414 Homo sapiens similar to Group X secretory phospholipase A2 precursor (Pho XM 377416 Homo sapiens similar to hypothetical protein MGC33867 (LOC401833), mRN XM 377420 Homo saplens similar to hypothetical protein BC011981 (LOC401837), mRN. XM 377423 Homo sapiens similar to Immunoglobulin heavy chain (LOC401841), mRNA XM 377424 Homo sapiens similar to Ig H-chain V-region (DP-40) (LOC401842), mRNA XM 377425 Homo sapiens similar to protein kinase related to Raf protein kinases; Metho XM 377426 Homo sapiens similar to IGHV gene product (LOC401845), mRNA XM 377429 Homo sapiens similar to IGHV gene product (LOC401846), mRNA XM 377439 Homo sapiens similar to hypothetical protein FLJ36144 (LOC401858), mRN/ XM 377444 Homo sapiens similar to peptidylprolyl isomerase A (cyclophilin A) (LOC4018

XM\_377445 Homo sapiens similar to RIKEN cDNA C330003B14 (LOC401860) mRNA XM\_377446 Homo sapiens similar to RIKEN cDNA C330003B14 (LOC401861) mRNA

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XM\_377447 Homo sapiens similar to ribosomal protein S1 (LOC401862), mRNA XM\_377451 Homo sapiens LOC401867 (LOC401867), mRNA XM 377455 Homo sapiens LOC401868 (LOC401868), mRNA XM\_377457 Homo sapiens similar to 40S RIBOSOMAL PROTEIN S12 (LOC401870), mR XM\_377464 Homo sapiens suppressor of Ty 6 homolog (S. cerevisiae) (SUPT6H), mRNA XM 377475 Homo sapiens similar to CDNA sequence BC004853 (LOC401883), mRNA XM\_377476 Homo sapiens similar to Arf2-prov protein (LOC401884), mRNA XM\_377477 Homo sapiens similar to 60S ribosomal protein L21 (LOC401885), mRNA XM\_377480 Homo sapiens similar to 60S ribosomal protein L17 (L23) (Amino acid starva XM\_377488 Homo saplens similar to bA526D8.2 (novel protein similar to KIAA1074) (LOC XM\_377496 Homo sapiens similar to hypothetical protein (LOC401894), mRNA XM 377498 Homo sapiens KIAA0863 protein (KIAA0863), mRNA XM\_377500 Homo sapiens similar to ribosomal protein S15; rat insulinoma gene (LOC40 XM\_377506 Homo sapiens egf-like module containing, mucin-like, hormone receptor-like XM 377511 Homo sapiens similar to 60S ribosomal protein L10 (QM protein homolog) (L XM 377512 Homo sapiens similar to glyceraldehyde 3-phosphate dehydrogenase (LOC4 XM\_377514 Homo sapiens similar to hypothetical protein FLJ38281 (LOC401898), mRN/ XM\_377515 Homo sapiens similar to zinc finger protein 433 (LOC401899), mRNA XM\_377516 Homo sapiens similar to ribosomal protein L28; 60S ribosomal protein L28 (L XM\_377521 Homo sapiens similar to 60S ribosomal protein L23a (LOC401904), mRNA XM\_377522 Homo saplens similar to fibroblast growth factor receptor 3 (LOC401907), mf XM\_377527 Homo sapiens similar to 60S ribosomal protein L29 (Cell surface heparin bin-XM\_377529 Homo sapiens similar to Zinc finger protein 345 (Zinc finger protein HZF10) ( XM\_377533 Homo sapiens similar to Pregnancy-specific beta-1-glycoprotein 4 precursor XM\_377537 Homo sapiens similar to OPA3 protein; Optic atrophy 3 (Iraqi-Jewish optic at XM\_377538 Homo sapiens similar to Mucin 4 (Tracheobronchial mucin) (LOC401923), m XM\_377553 Homo sapiens similar to zinc finger protein (LOC401932), mRNA XM\_377554 Homo sapiens similar to hypothetical protein MGC4734 (LOC401933), mRN/ XM\_377555 Homo sapiens similar to RIKEN cDNA 5830442J12 (LOC401934), mRNA XM\_377556 Homo sapiens similar to Hypothetical protein CBG06524 (LOC401936), mRN XM\_377558 Homo sapiens similar to elongation factor 1 delta (LOC401937), mRNA XM\_377563 Homo sapiens similar to Hypothetical protein DJ845O24.1 (LOC401938), mF XM\_377565 Homo sapiens similar to Hypothetical protein DJ845O24.1 (LOC401939), mF XM\_377566 Homo sapiens similar to dJ845O24.1 (Melanoma Preferentially Expressed Ar XM\_377568 Homo sapiens similar to hypothetical protein (LOC401941), mRNA XM\_377570 Homo sapiens similar to Hypothetical protein DJ845O24.1 (LOC401942), mF XM\_377577 Homo sapiens hypothetical gene supported by AK127275 (LOC401944), mR XM\_377579 Homo saplens similar to cICK0721Q.2 (60S Ribosomal Protein L12 LIKE pro XM\_377580 Homo sapiens similar to DC2 protein (LOC401946), mRNA XM\_377583 Homo saplens similar to ribosomal protein L27 (LOC401947), mRNA XM\_377585 Homo sapiens similar to receptor tyrosine phosphatase (LOC401948), mRN/ XM\_377586 Homo sapiens similar to MGC52970 protein (LOC401949), mRNA XM\_377593 Homo saplens similar to dJ612B15.1 (novel protein similar to 60S ribosomal XM\_377594 Homo sapiens similar to sporulation-induced transcript 4-associated protein ( XM\_377595 Homo sapiens similar to beta-actin (LOC401956), mRNA XM\_377597 Homo sapiens similar to glyceraldehyde 3-phosphate dehydrogenase (LOC4 XM\_377599 Homo sapiens similar to hypothetical protein MGC8902 (LOC401962), mRN/ XM\_377600 Homo sapiens similar to hypothetical protein MGC8902 (LOC401963), mRN/ XM 377601 Homo sapiens similar to AG3 (LOC401964), mRNA XM\_377611 Homo sapiens similar to Olfactory receptor 10J6 (LOC401973), mRNA XM\_377613 Homo saplens similar to ribosomal protein S2; 40S ribosomal protein S2 (LO XM\_377618 Homo sapiens LOC401976 (LOC401976), mRNA XM\_377620 Homo sapiens similar to 14.5 kDa translational inhibitor protein (p14.5) (UK1 XM 377630 Homo sapiens similar to RIKEN cDNA 2610020C11 (LOC401983), mRNA XM\_377631 Homo sapiens similar to beta actin (LOC401987), mRNA

XM\_377633 Homo sapiens similar to Olfactory receptor 2G2 (LOC401990), mRNA
 XM\_377635 Homo sapiens similar to CDC-like kinase 3; cdc2/CDC28-like protein kinase

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XM 377643 Homo sapiens similar to Olfactory receptor 2T2 (LOC401992), mRNA XM 377644 Homo saniens similar to Olfactory receptor 2T5 (LOC401993), mRNA XM 377645 Homo sapiens similar to seven transmembrane helix receptor (LOC401994), XM\_377649 Homo sapiens similar to 14.5 kDa translational Inhibitor protein (p14.5) (UK1 XM 377655 Homo sapiens similar to seven transmembrane helix receptor (LOC401997), XM 377657 Homo sapiens similar to Olfactory receptor 2T5 (LOC401998), mRNA XM\_377658 Homo sapiens similar to seven transmembrane helix receptor (LOC401999). XM\_377659 Homo sapiens similar to Olfactory receptor 2T11 (LOC402000), mRNA XM\_377660 Homo sapiens similar to seven transmembrane helix receptor (LOC402001). XM\_377661 Homo sapiens similar to Olfactory receptor 5BF1 (LOC402002), mRNA XM 377662 Homo sapiens similar to Olfactory receptor 2T4 (LOC402003), mRNA XM 377663 Homo sapiens similar to Olfactory receptor 2T1 (Olfactory receptor 1-25) (OF XM 377664 Homo sapiens similar to Olfactory receptor 2T2 (LOC402006), mRNA XM 377665 Homo sapiens similar to Olfactory receptor 2T3 (LOC402007), mRNA XM 377666 Homo sapiens similar to Olfactory receptor 2T5 (LOC402008), mRNA XM\_377668 Homo sapiens similar to hypothetical protein F830045P16 (LOC402009), mF XM\_377675 Homo saplens similar to dJ1187J4.2 (novel protein similar to rat RYF3) (LOC XM\_377687 Homo sapiens similar to hypothetical protein FLJ21347 (LOC402027), mRN/ XM 377690 Homo sapiens similar to extensin-like protein (LOC402030), mRNA XM 377691 Homo saplens LOC402032 (LOC402032), mRNA XM\_377694 Homo sapiens similar to LOC284861 protein (LOC402034), mRNA XM\_377695 Homo sapiens similar to LOC284861 protein (LOC402035), mRNA XM 377696 Homo sapiens similar to carbonic anhydrase XV (LOC402036), mRNA XM 377700 Homo saplens similar to LOC284861 protein (LOC402038), mRNA XM 377713 Homo sapiens similar to SRR1-like protein (LOC402055), mRNA XM 377715 Homo sapiens similar to Small nuclear ribonucleoprotein associated protein I XM 377716 Homo sapiens similar to 40S ribosomal protein S17 (LOC402057), mRNA XM\_377717 Homo saplens similar to dJ1119A7.3 (PUTATIVE novel protein similar to HP: XM\_377720 Homo sapiens hypothetical protein BC012882 (LOC150356), mRNA XM\_377721 Homo sapiens similar to Hypothetical protein CBG23588 (LOC402064), mRN XM\_377725 Homo sapiens similar to LWamide neuropeptide precursor protein (LOC4020 XM 377728 Homo saplens similar to Hypothetical protein CBG08601 (LOC402067), mRN XM\_377732 Homo sapiens similar to egg envelope component ZPAX (LOC402068), mRN XM 377741 Homo sapiens similar to SPCPB16A4.07c (LOC402072), mRNA XM 377742 Homo sapiens KIAA1940 protein (KIAA1940), mRNA XM 377751 Homo saplens similar to Ig kappa chain V region (Z3) - human (LOC402089) XM\_377754 Homo sapiens LOC402090 (LOC402090), mRNA XM 377755 Homo sapiens similar to hypothetical protein (LOC402094), mRNA XM\_377756 Homo sapiens similar to dJ908M14.1.3 (ribosomal protein S21, isoform 3) (L XM\_377760 Homo saplens similar to ribosomal protein L22 (LOC402098), mRNA XM 377761 Homo sapiens similar to ribosomal protein L22 (LOC402100), mRNA XM\_377766 Homo sapiens similar to hypothetical protein DKFZp434P0316 (LOC402103) XM\_377768 Homo sapiens similar to hypothetical protein FLJ10462 (LOC402104), mRN/ XM 377771 Homo sapiens similar to 60S ribosomal protein L6 (TAX-responsive enhance XM 377774 Homo sapiens kinesin family member 5C (KIF5C), mRNA XM 377776 Homo sapiens similar to Acidic ribosomal phosphoprotein P0 (LOC402109), XM 377778 Homo sapiens LOC402110 (LOC402110), mRNA XM 377783 Homo sapiens similar to RIKEN cDNA A930041G11 gene (LOC402117), mR XM 377786 Homo sapiens similar to ribosomal protein L23 (LOC402120), mRNA XM 377797 Homo sapiens similar to laminin receptor-like protein LAMRL5 (LOC402123). XM 377803 Homo sapiens similar to RIKEN cDNA 1700112C13 (LOC402128), mRNA XM 377809 Homo sapiens similar to Olfactory receptor 5K2 (LOC402135), mRNA XM 377811 Homo sapiens similar to transcription factor INI (LOC402136), mRNA XM\_377815 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM\_377818 Homo sapiens similar to mesenchymal stem cell protein DSC92; neurite outg XM 377820 Homo sapiens similar to ribosomal protein L7-like 1 (LOC402152), mRNA

XM 377823 Homo sapiens similar to p53 apoptosis effector related to Pmp22; p53 apopto

XM 377824 Homo sapiens similar to Kinesin-like protein KIF3A (Microtubule plus end-din XM 377828 Homo sapiens similar to GLP\_171\_8870 6279 (LOC402160), mRNA XM 377829 Homo sapiens similar to hypothetical protein MGC45871 (LOC402161), mRN XM 377830 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402164), mRNA XM 377831 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402165), mRNA XM\_377832 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402166), mRNA XM\_377834 Homo saplens similar to deubiquitinating enzyme 3 (LOC402167), mRNA XM\_377835 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402168), mRNA XM 377836 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402169), mRNA XM 377837 Homo sapiens similar to deubiquitinating enzyme 3 (LOC402170), mRNA XM 377841 Homo sapiens similar to 60S ribosomal protein L21 (LOC402176), mRNA XM 377845 Homo sapiens similar to ribosomal protein S21; 40S ribosomal protein S21 (I XM 377847 Homo sapiens similar to ras-related C3 botulinum toxin substrate 1 isoform F XM 377849 Homo sapiens similar to alanyl trna synthetase (LOC402188), mRNA XM 377861 Homo sapiens similar to glycine-rich protein (LOC402194), mRNA XM 377875 Homo saplens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_377877 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_377878 Homo sapiens similar to Transcription inItiation factor TFIID 28 kDa subunit ( XM 377879 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 377880 Homo sapiens similar to Transcription Initiation factor TFIID 28 kDa subunit ( XM\_377881 Homo saplens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_377882 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 377883 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 377884 Homo sapiens similar to Transcription Initiation factor TFIID 28 kDa subunit ( XM 377885 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 377886 Homo sapiens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM 377887 Homo saplens similar to Transcription initiation factor TFIID 28 kDa subunit ( XM\_377889 Homo sapiens similar to Transcription Initiation factor TFIID 28 kDa subunit ( XM\_377896 Homo sapiens similar to ribosomal protein L13a; 60S ribosomal protein L13a XM\_377904 Homo sapiens similar to cytoplasmic beta-actin (LOC402218), mRNA XM 377907 Homo saplens similar to beta-glucuronidase (LOC402223), mRNA XM 377910 Homo sapiens similar to RIKEN cDNA A730017C20 (LOC402228), mRNA XM\_377911 Homo sapiens similar to hypothetical protein E230025N22 (LOC402231), mF XM 377912 Homo sapiens KIAA0194 protein (KIAA0194), mRNA XM\_377918 Homo sapiens similar to Ac1147 (LOC402235). mRNA XM\_377919 Homo saplens similar to RIKEN cDNA 2310040C09 (LOC402237), mRNA XM 377920 Homo sapiens similar to Selenophosphate synthetase 1 (LOC402238), mRN XM 377924 Homo sapiens similar to Olfactory receptor 4F3 (LOC402242), mRNA XM 377925 Homo saplens similar to hypothetical protein FLJ37300 (LOC402244), mRN/ XM\_377926 Homo sapiens similar to mesenchymal stem cell protein DSC92; neurite outc XM\_377927 Homo sapiens similar to olfactory receptor MOR267-3 (LOC402246), mRNA XM 377928 Homo sapiens similar to Calgizzarin (S100C protein) (MLN 70) (LOC402247) XM\_377929 Homo sapiens similar to ribosomal protein L31 (LOC402248), mRNA XM 377931 Homo saplens similar to olfactory receptor MOR145-2 (LOC402249), mRNA XM 377932 Homo sapiens similar to 4930579E17Rik protein (LOC402250), mRNA XM 377933 Homo sapiens similar to MGC76216 protein (LOC402251), mRNA XM\_377934 Homo sapiens similar to peptidylprolyl isomerase A (LOC402252), mRNA XM 377935 Homo sapiens similar to FLJ40113 protein (LOC402253), mRNA XM 377938 Homo sapiens similar to ELK1 (LOC402257), mRNA XM 377941 Homo sapiens similar to equilibrative nucleoside transporter 4; hENT4 (LOC XM 377942 Homo sapiens similar to vomeronasal receptor V1RC3 (LOC402273), mRNA XM 377943 Homo sapiens similar to Opioid binding protein/cell adhesion molecule precu XM 377944 Homo sapiens similar to protein kinase related to Raf protein kinases; Metho XM 377945 Homo sapiens similar to metabotropic glutamate receptor 8; G protein-couple XM 377946 Homo sapiens similar to GTF2I repeat domain containing 1 isoform 2; William XM 377947 Homo sapiens similar to opposite strand transcription unit to Stag3; Gats pro XM 377949 Homo sapiens similar to GrpE protein homolog 1, mitochondrial precursor (N

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XM 377950 Homo sapiens similar to GTF2I repeat domain containing 1 isoform 2; Williar XM 377951 Homo sapiens similar to peptidylprolyl isomerase A (LOC402284), mRNA XM 377955 Homo sapiens hypothetical protein DKFZP434A0225 (DKFZP434A0225), mF XM\_377956 Homo sapiens similar to RIKEN cDNA 4930511M11 (LOC402286), mRNA XM\_377957 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; \u03b1 XM\_377958 Homo sapiens similar to Ser/Thr protein kinase PAR-1Balpha (LOC402289), XM\_377959 Homo sapiens similar to Nuclear protein Hcc-1 (HSPC316) (Proliferation ass XM\_377961 Homo sapiens similar to opposite strand transcription unit to Stag3; Gats pro XM 377962 Homo sapiens postmeiotic segregation increased 2-like 1 (PMS2L1), mRNA XM\_377964 Homo sapiens similar to 40S RIBOSOMAL PROTEIN SA (P40) (34/67 KD L/ XM 377969 Homo sapiens similar to 60S ribosomal protein L23a (LOC402294), mRNA XM 377970 Homo sapiens similar to Argininosuccinate synthase (Citrulline-aspartate lig. XM 377972 Homo sapiens similar to Triosephosphate isomerase (TIM) (LOC402298), ml Homo sapiens similar to aldo-keto reductase family 1, member B10; aldose r XM 377973 XM 377974 Homo sapiens similar to beta-tubulin (LOC402300), mRNA XM\_377976 Homo sapiens similar to Nucleoside diphosphate kinase, mitochondrial precu XM\_377995 Homo sapiens similar to Olfactory receptor 2A1 (LOC402317), mRNA XM\_377997 Homo sapiens similar to 60S ribosomal protein L32 (LOC402318), mRNA XM\_377998 Homo sapiens similar to Huntingtin interacting protein K (LOC402319), mRN. XM\_377999 Homo saplens similar to BET1 homolog (Golgi vesicular membrane traffickin-XM 378001 Homo sapiens similar to TSH receptor suppressor element-binding protein-1 XM\_378002 Homo sapiens similar to ppg3 (LOC402322), mRNA XM\_378003 Homo sapiens similar to S-adenosylmethionine decarboxylase 1; S-adenosyl XM 378007 Homo saplens similar to hypothetical protein PFL1865w (LOC402324), mRN XM 378008 Homo sapiens similar to ENSANGP00000017949 (LOC402325), mRNA XM\_378009 Homo sapiens similar to hypothetical protein (LOC402326), mRNA XM\_378010 Homo sapiens similar to stage-specific S antigen homolog (LOC402327), mF XM\_378014 Homo sapiens similar to ubiquitin-specific protease 17-like protein (LOC4023 XM\_378015 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM\_378018 Homo sapiens similar to chromosome 11 open reading frame2; chromosome XM\_378028 Homo saplens similar to L21 ribosomal protein (LOC402336), mRNA XM 378031 Homo saplens similar to short chain dehydrogenase reductase 9 (LOC40233 XM 378033 Homo sapiens similar to chromosome 20 open reading frame 6 (LOC402340 XM 378035 Homo sapiens similar to fatty acid binding protein 9, testis; testis lipid binding XM 378036 Homo sapiens similar to tropomyosin 3, gamma (LOC402344), mRNA XM 378043 Homo sapiens similar to RIKEN cDNA 1700091F14 (LOC402353), mRNA XM 378044 Homo sapiens similar to hypothetical protein (LOC402354), mRNA XM 378046 Homo sapiens similar to RIKEN cDNA 1700091F14 (LOC402355), mRNA XM 378052 Homo saplens similar to Interferon omega-1 precursor (Interferon alpha-II-1) XM\_378054 Homo saplens similar to hypothetical protein (LOC402360), mRNA XM\_378062 Homo saplens similar to 6-pyruvoyl-tetrahydropterin synthase (LOC402365), XM\_378063 Homo saplens similar to 6-pyruvoyl-tetrahydropterin synthase (LOC402366), XM 378064 Homo sapiens LOC402367 (LOC402367), mRNA XM\_378067 Homo saplens similar to phosphoglucomutase 5 (LOC402368), mRNA XM\_378078 Homo sapiens chromosome 9 open reading frame 4 (C9orf4), mRNA XM 378080 Homo sapiens similar to beta-1,3-N-acetylglucosaminyltransferase 5 (LOC40 XM 378087 Homo sapiens similar to ligand-independent activating molecule for estrogen XM 378089 Homo sapiens similar to LOC286220 protein (LOC402381), mRNA XM 378090 Homo sapiens similar to F4N2.10 (LOC402382), mRNA XM 378102 Homo sapiens similar to ENSANGP0000002367 (LOC402386), mRNA XM\_378103 Homo sapiens similar to hydroxymethylpterin pyrophosphokinase-dihydropte XM 378113 Homo sapiens similar to LOC142827 protein (LOC402402), mRNA XM 378116 Homo sapiens similar to DKFZP434O047 protein (LOC402403), mRNA XM\_378118 Homo sapiens similar to PAGE-5 protein (LOC402404), mRNA XM 378123 Homo sapiens similar to Mitochondrial import receptor subunit TOM20 homol XM 378124 Homo sapiens similar to bA203I16.1 (KIAA0970 protein) (LOC402414), mRN

XM 378125 Homo sapiens similar to hypothetical protein MGC57211 (LOC402415), mRN

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- XM\_378128 Homo sapiens similar to d119N1.1 (novel protein) (LOC402416), mRNA XM\_378143 Homo sapiens similar to diactory receptor MOR262-9 (LOC402424), mRNA XM\_378163 Homo sapiens similar to tau tubulin kinase 2; tau-tubulin kinase (LOC402422 XM\_378152 Homo sapiens similar to b420316.1 (KIAA0870 protein) (LOC402432), mRNA M\_378155 Homo sapiens similar to bydcomethylpterin yprothosphoklanse-offlydropte
- XM\_378156 Homo sapiens similar to trophinin; melanoma antigen, family D, 3; trophinin-7 XM\_378158 Homo sapiens similar to hypothetical protein FLJ90430 (LOC402437), mRN/
- XM\_378172 Homo sapiens spermatogenesis-related protein 8 (MGC44294), mRNA XM\_378173 Homo sapiens hypothetical protein MGC18216 (MGC18216), mRNA
- XM\_378175 Homo sapiens hypothetical protein BC017488 (LOC124446), mRNA
  XM\_378177 Homo sapiens hypothetical gene supported by NM\_078471 (LOC399700), m
- XM\_378177 Homo sapiens hypothetical protein MGC9913 (MGC9913), mRNA
- XM\_378180 Homo sapiens hypothetical protein MGC10812 (MGC10812), mRNA
- XM\_378181 Homo saplens KIAA1041 protein (KIAA1041), mRNA
   XM\_378183 Homo saplens hypothetical protein MGC5457 (MGC5457), mRNA

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- XM\_378183 Homo sapiens hypothetical protein (MIAA1383), mRNA
- XM\_378185 Homo sapiens hypothetical gene supported by AL833273; NM\_014644 (LOC
- XM 378186 Homo saplens hypothetical protein MGC15634 (MGC15634), mRNA
- XM\_378187 Homo sapiens hypothetical protein MGC4473 (MGC4473), mRNA
  XM\_378189 Homo sapiens hypothetical protein MGC15705 (MGC15705), mRNA
- XM\_378190 Homo sapiens hypothetical protein MGC10955 (MGC10955), mRNA
- XM\_378191 Homo saplens hypothetical protein PRO2964 (PRO2964), mRNA
- XM\_378192 Homo saplens hypothetical gene supported by NM\_015583 (LOC399702), m
- XM\_378193 Homo sapiens hypothetical protein MGC10981 (MGC10981), mRNA
  XM\_378194 Homo sapiens hypothetical gene supported by NM\_020669 (LOC399703), m
- XM\_378195 Homo saplens hypothetical gene supported by NM\_001517 (LOC399704), m
- XM\_378196 Homo sapiens hypothetical protein FLJ36112 (FLJ36112), mRNA XM\_378197 Homo sapiens hypothetical protein FLJ14464 (FLJ14464), mRNA
- XM\_378199 Homo sapiens hypothetical protein FLJ10232 (FLJ10232), mRNA
- XM\_378200 Homo sapiens hypothetical gene supported by AK097673 (LOC399706), mR
- XM\_378201 Homo sapiens hypothetical protein LOC282980 (LOC282980), mRNA XM\_378202 Homo sapiens hypothetical gene supported by AK056101 (LOC399707), mR
- XM\_378203 Homo sapiens hypothetical gene supported by BC055423 (LOC399708), mR
  XM\_378207 Homo sapiens hypothetical protein LOC338588 (LOC338588), mRNA
- XM\_378208 Homo sapiens hypothetical gene supported by AK125014 (LOC399713), mR XM\_378210 Homo sapiens hypothetical gene supported by AK128810 (LOC399717), mR
- XM\_378211 Homo sapiens hypothetical protein LOC254312 (LOC254312), mRNA XM\_378215 Homo sapiens hypothetical gene supported by BC040880 (LOC399726), mR
- XM\_378215 Homo sapiens hypothetical gene supported by BC040880 (LOC399726), mR
   XM\_378218 Homo sapiens hypothetical gene supported by BX537934 (LOC399736), mR
- XM\_378219 Homo sapiens LOC399737 (LOC399737), mRNA
- XM\_378223 Homo sapiens hypothetical gene supported by AK093334; AL833330; BC02t
- XM\_378224 Homo sapiens hypothetical gene supported by X06747; BC012158; NM\_002 XM\_378226 Homo sapiens hypothetical protein LOC170371 (LOC170371), mRNA
- XM\_378226 Homo sapiens hypothetical protein LOC170371 (LOC170371), mRNA
   XM\_378227 Homo sapiens hypothetical gene supported by AK093334; AL833330; BC020
- XM\_378227 Homo sapiens hypothetical gene supported by AK093334; AL033330; BC020
  XM\_378228 Homo sapiens hypothetical gene supported by AK093334; AL033330; BC020
- XM\_378230 Homo sapiens hypothetical protein LOC283025 (LOC283025), mRNA
- XM\_378232 Homo sapiens hypothetical protein LOC219690 (LOC219690), mRNA XM\_378235 Homo sapiens LOC399785 (LOC399785), mRNA
- XM\_378236 Homo sapiens hypothetical gene supported by AK091031 (LOC399786), mR
- XM\_378238 Homo sapiens hypothetical protein LOC283050 (LOC283050), mRNA
- XM\_378239 Homo sapiens hypothetical gene supported by AK056520; NM\_153030 (LOC XM\_378240 Homo sapiens hypothetical protein LOC170425 (LOC170425), mRNA
- XM\_378240 Homo sapiens hypothetical protein LOC170425 (LOC170425), mRNA
  XM\_378247 Homo sapiens hypothetical gene supported by AK123344 (LOC399806), mR
- XM\_378250 Homo sapiens hypothetical protein LOC92482 (LOC92482), mRNA
- XM\_378251 Homo sapiens hypothetical protein LOC143188 (LOC143188), mRNA
- XM\_378255 Homo sapiens hypothetical gene supported by AK128177 (LOC399827), mR
- XM\_378257 Homo sapiens hypothetical gene supported by AK125849 (LOC399829), mR

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XM 378259 Homo sapiens hypothetical gene supported by BX647230 (LOC399832), mR
XM 378260 Homo sapiens hypothetical gene supported by AK126615 (LOC399833), mR
XM_378261 Homo sapiens hypothetical gene supported by BC004945; BC020442; BC06
XM 378262 Homo sapiens hypothetical protein LOC284701 (LOC284701), mRNA
XM_378266 Homo sapiens hypothetical gene supported by AY129010 (LOC399851), mR
XM 378271 Homo sapiens hypothetical gene supported by AK002039 (LOC399865), mR
XM_378272 Homo sapiens hypothetical gene supported by BX647519 (LOC399866), mR
XM_378273 Homo sapiens hypothetical gene supported by AK127718 (LOC399867), mR
XM_378276 Homo sapiens LOC399872 (LOC399872), mRNA
XM_378277 Homo sapiens hypothetical gene supported by AK096475 (LOC399873), mR
XM_378279 Homo sapiens hypothetical gene supported by BC040220 (LOC399875), mR
XM 378280 Homo sapiens hypothetical gene supported by AK023501 (LOC399876), mR
XM 378283 Homo sapiens hypothetical gene supported by AK127155 (LOC399879), mR
XM 378286 Homo sapiens hypothetical gene supported by AK093366 (LOC399884), mR
XM 378288 Homo sapiens hypothetical gene supported by AK123417 (LOC399886), mR
XM_378297 Homo sapiens hypothetical gene supported by X15675 (LOC399912), mRNA
XM_378299 Homo sapiens hypothetical gene supported by AK094674 (LOC399919), mR
XM_378300 Homo sapiens hypothetical gene supported by BC039105 (LOC399920), mR
XM_378301 Homo sapiens hypothetical gene supported by AL832797 (LOC399924), mR
XM_378303 Homo sapiens hypothetical protein LOC283214 (LOC283214), mRNA
XM_378304 Homo sapiens hypothetical gene supported by BC026292 (LOC399930), mR
XM 378305 Homo sapiens LOC399933 (LOC399933), mRNA
XM_378308 Homo sapiens LOC399945 (LOC399945), mRNA
XM 378309 Homo sapiens LOC399951 (LOC399951), mRNA
XM 378311 Homo sapiens hypothetical gene supported by AK124988 (LOC399954), mR
XM 378312 Homo sapiens hypothetical protein LOC283143 (LOC283143), mRNA
XM 378313 Homo sapiens LOC399955 (LOC399955), mRNA
XM 378314 Homo sapiens hypothetical protein LOC283152 (LOC283152), mRNA
XM_378316 Homo saplens hypothetical gene supported by BX647608 (LOC399959), mR
XM_378317 Homo sapiens LOC399961 (LOC399961), mRNA
XM_378320 Homo sapiens hypothetical gene supported by AK125355 (LOC399971), mR
XM_378321 Homo saplens hypothetical gene supported by AK096370 (LOC399972), mR
XM_378325 Homo saplens hypothetical gene supported by BC031979 (LOC399978), mR
XM 378326 Homo sapiens hypothetical gene supported by AK127362 (LOC399980), mR
XM_378327 Homo sapiens hypothetical protein LOC283177 (LOC283177), mRNA
XM 378328 Homo saplens hypothetical gene supported by BC039168 (LOC399982), mR
XM 378329 Homo sapiens hypothetical gene supported by AK090616 (LOC399983), mR
XM_378330 Homo sapiens hypothetical gene supported by AK057909 (LOC399984), mR
XM_378331 Homo sapiens hypothetical gene supported by AK056228 (LOC399986), mR
XM 378332 Homo sapiens LOC399987 (LOC399987), mRNA
XM 378336 Homo sapiens LOC399993 (LOC399993), mRNA
XM_378339 Homo sapiens hypothetical gene supported by AK128230 (LOC400002), mR
XM_378340 Homo sapiens LOC400004 (LOC400004), mRNA
XM_378342 Homo sapiens hypothetical gene supported by BC003510; NM_002823 (LOC
XM_378343 Homo sapiens hypothetical gene supported by AK097936 (LOC400007), mR
XM_378344 Homo sapiens LOC400015 (LOC400015), mRNA
XM_378346 Homo sapiens hypothetical protein LOC196415 (LOC196415), mRNA
XM_378349 Homo sapiens LOC400019 (LOC400019). mRNA
XM 378350 Homo sapiens hypothetical gene supported by BC047417 (LOC400027), mR
XM_378353 Homo sapiens LOC40003O (LOC400030), mRNA
XM 378354 Homo sapiens LOC400031 (LOC400031), mRNA
 XM_378355 Homo sapiens hypothetical protein LOC283332 (LOC283332), mRNA
 XM 378356 Homo sapiens hypothetical protein LOC283400 (LOC283400), mRNA
 XM 378358 Homo sapiens hypothetical gene supported by AK123741 (LOC400041), mR
 XM_378360 Homo sapiens hypothetical gene supported by BC009385 (LOC400043), mR
 XM 378362 Homo sapiens hypothetical gene supported by AK123272 (LOC400046), mR
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XM\_378363 Homo sapiens LOC400047 (LOC400047), mRNA

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XM 378365 Homo sapiens LOC400050 (LOC400050), mRNA XM\_378366 Homo sapiens hypothetical gene supported by AK124066 (LOC400051), mR XM\_378367 Homo sapiens LOC400053 (LOC400053), mRNA XM\_378368 Homo sapiens hypothetical protein LOC283392 (LOC283392), mRNA XM\_378371 Homo sapiens hypothetical protein LOC338758 (LOC338758), mRNA XM\_378372 Homo sapiens hypothetical protein LOC256021 (LOC256021), mRNA XM 378374 Homo sapiens hypothetical protein LOC338809 (LOC338809), mRNA XM 378379 Homo sapiens hypothetical protein LOC283432 (LOC283432), mRNA XM 378381 Homo sapiens hypothetical gene supported by BX648662 (LOC400070), mR XM 378388 Homo sapiens hypothetical protein LOC144742 (LOC144742), mRNA XM 378389 Homo sapiens hypothetical gene supported by AK057632; AL137270; BC05: XM 378390 Homo sapiens hypothetical protein LOC144678 (LOC144678), mRNA XM\_378392 Homo sapiens hypothetical gene supported by AK094824 (LOC400087), mR XM\_378393 Homo sapiens hypothetical gene supported by AK126855 (LOC400088), mR XM 378394 Homo sapiens hypothetical protein LOC116437 (LOC116437), mRNA XM 378398 Homo saplens LOC400092 (LOC400092), mRNA XM\_378399 Homo sapiens hypothetical gene supported by BC024195 (LOC400099), mR XM\_378404 Homo sapiens hypothetical gene supported by AK098387 (LOC400108), mR XM 378405 Homo sapiens LOC400111 (LOC40011 1), mRNA XM 378407 Homo sapiens hypothetical gene supported by BX648491 (LOC400115), mR XM 378411 Homo saplens hypothetical gene supported by AK124383 (LOC400123), mR XM 378412 Homo sapiens LOC400125 (LOC400125), mRNA XM 378413 Homo sapiens hypothetical gene supported by BC025370 (LOC400128), mR XM\_378414 Homo sapiens hypothetical gene supported by AF529010 (LOC400131), mR XM\_378416 Homo sapiens LOC400134 (LOC400134), mRNA XM\_378419 Homo sapiens hypothetical protein LOC144766 (LOC144766), mRNA XM\_378421 Homo sapiens hypothetical gene supported by AK056689 (LOC400144), mR XM 378425 Homo sapiens LOC400151 (LOC400151), mRNA XM\_378428 Homo sapiens hypothetical gene supported by BC035106 (LOC400154), mR XM\_378430 Homo sapiens hypothetical protein LOC283480 (LOC283480), mRNA XM\_378431 Homo sapiens hypothetical protein LOC283483 (LOC283483), mRNA XM 378434 Homo sapiens hypothetical gene supported by BC038751 (LOC400161), mR XM 378436 Homo sapiens hypothetical gene supported by BC034786 (LOC400163), mR XM\_378437 Homo sapiens hypothetical gene supported by BX649107 (LOC400164), mR XM\_378439 Homo sapiens hypothetical gene supported by BC041346 (LOC400167), mR XM\_378441 Homo sapiens LOC400171 (LOC400171), mRNA XM 378449 Homo sapiens LOC400201 (LOC4002O1), mRNA XM\_378452 Homo sapiens hypothetical protein LOC253970 (LOC253970), mRNA XM\_378453 Homo sapiens hypothetical gene supported by AK125955 (LOC400208), mR XM\_378454 Homo sapiens hypothetical protein LOC283547 (LOC283547), mRNA XM\_378455 Homo sapiens hypothetical protein LOC283551 (LOC283551), mRNA XM\_378456 Homo sapiens hypothetical gene supported by AK127576 (LOC400212), mR XM 378457 Homo sapiens hypothetical gene supported by BC055421 (LOC400213), mR XM\_378460 Homo sapiens hypothetical gene supported by BC037850 (LOC400216), mR XM\_378462 Homo sapiens hypothetical gene supported by AK026100 (LOC400221), mR XM\_378465 Homo sapiens LOC400228 (LOC400228), mRNA XM 378467 Homo sapiens LOC400231 (LOC400231), mRNA XM\_378470 Homo sapiens hypothetical gene supported by BC029835 (LOC400234), mR XM 378472 Homo sapiens LOC400236 (LOC400236), mRNA XM\_378473 Homo sapiens hypothetical gene supported by AK093266 (LOC400238), mR XM\_378476 Homo sapiens hypothetical gene supported by AK127179 (LOC400242), mR XM 378477 Homo sapiens LOC400243 (LOC400243), mRNA XM 378482 Homo sapiens LOC400249 (LOC400249), mRNA XM\_378487 Homo sapiens hypothetical protein LOC145216 (LOC145216), mRNA XM\_378488 Homo sapiens LOC400256 (LOC400256), mRNA XM 378489 Homo sapiens hypothetical gene supported by AK091459 (LOC400257), mR

XM 378490 Homo sapiens hypothetical gene supported by AK127521 (LOC400262), mR

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- XM 378491 Homo sapiens hypothetical gene supported by BC033241 (LOC400263), mR XM 378493 Homo sapiens hypothetical gene supported by AK127783 (LOC400302), mR
- XM 378494 Homo sapiens LOC400307 (LOC400307), mRNA

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- XM\_378496 Homo sapiens hypothetical gene supported by BC047459 (LOC400314), mR
- XM\_378506 Homo sapiens hypothetical gene supported by AK125576; AL117445; BC03: XM\_378507 Homo sapiens hypothetical protein LOC145845 (LOC145845), mRNA
- XM\_378511 Homo sapiens hypothetical gene supported by BC031266 (LOC400368), mR
- XM\_378512 Homo sapiens hypothetical gene supported by BX537772 (LOC400369), mR
- XM\_378514 Homo sapiens hypothetical protein LOC283663 (LOC283663), mRNA XM\_378515 Homo sapiens hypothetical gene supported by AK091917 (LOC400377), mR
- XM 378516 Homo sapiens hypothetical protein LOC255177 (LOC255177), mRNA
- XM 378517 Homo sapiens hypothetical protein MGC15885 (MGC15885), mRNA
- XM 378522 Homo sapiens hypothetical gene supported by BC043587 (LOC400386), mR
- XM 378523 Homo sapiens LOC400388 (LOC40O388), mRNA
- XM\_378525 Homo sapiens hypothetical protein LOC283731 (LOC283731), mRNA
- XM\_378526 Homo sapiens LOC400393 (LOC40O393), mRNA
- XM 378528 Homo sapiens LOC400398 (LOC40O398), mRNA XM 378529 Homo saplens hypothetical gene supported by AK022116 (LOC400400), mR
- XM\_378532 Homo sapiens hypothetical protein LOC253044 (LOC253044), mRNA
- XM 378535 Homo sapiens LOC400411 (LOC40O411), mRNA
- XM 378538 Homo sapiens hypothetical gene supported by AL137524 (LOC400433), mR
- XM 378542 Homo saplens hypothetical protein LOC283761 (LOC283761), mRNA
- XM 378544 Homo sapiens hypothetical protein LOC283682 (LOC283682), mRNA XM 378545 Homo saplens hypothetical gene supported by BC040875 (LOC400456), mR
- XM 378546 Homo sapiens hypothetical protein LOC145820 (LOC145820), mRNA
- XM\_378549 Homo sapiens hypothetical protein LOC91948 (LOC91948), mRNA
- XM\_378550 Homo sapiens hypothetical protein LOC145757 (LOC145757), mRNA
- XM\_378551 Homo saplens LOC400463 (LOC40O463), mRNA
- XM 378553 Homo sapiens hypothetical gene supported by BC041891 (LOC400475), mR
- XM 378558 Homo saplens hypothetical protein LOC146443 (LOC146443), mRNA XM 378562 Homo sapiens hypothetical gene supported by AL162011 (LOC400496), mR
- XM 378564 Homo sapiens LOC400500 (LOC400500), mRNA
- XM 378567 Homo sapiens hypothetical gene supported by BX640722 (LOC400505), mR
- XM 378571 Homo sapiens hypothetical gene supported by AK127191 (LOC400511), mR
- XM\_378573 Homo saplens hypothetical gene supported by AK025061 (LOC400512), mR XM\_378576 Homo sapiens hypothetical gene supported by AK126852 (LOC400516), mR
- XM\_378577 Homo saplens hypothetical gene supported by AK123554 (LOC400517), mR
- XM 378578 Homo sapiens hypothetical gene supported by BC023258 (LOC400518), mR XM\_378579 Homo saplens hypothetical gene supported by AK097527 (LOC400522), mR
- XM\_378582 Homo sapiens LOC400523 (LOC400523), mRNA
- XM 378586 Homo sapiens LOC400531 (LOC400531), mRNA
- XM 378588 Homo sapiens hypothetical gene supported by BC047414 (LOC400532), mR
- XM 378589 Homo saplens hypothetical protein LOC283914 (LOC283914), mRNA XM 378590 Homo sapiens hypothetical gene supported by AK129756 (LOC400533), mR
- XM 378592 Homo sapiens LOC400534 (LOC40 0534), mRNA
- XM 378594 Homo sapiens hypothetical gene supported by AK128747 (LOC400535), mR
- XM\_378595 Homo sapiens hypothetical gene supported by AK057373 (LOC400536), mR
- XM 378599 Homo sapiens hypothetical protein LOC283854 (LOC283854), mRNA
- XM\_378601 Homo sapiens hypothetical gene supported by AK057319 (LOC400538), mR
- XM\_378606 Homo sapiens hypothetical protein LOC283867 (LOC283867), mRNA
- XM\_378607 Homo sapiens hypothetical gene supported by AL080152 (LOC400540), mR
- XM\_378608 Homo sapiens hypothetical gene supported by AK096066 (LOC400541). mR XM 378609 Homo sapiens hypothetical gene supported by BC064480 (LOC400544), mR
- XM 378610 Homo sapiens LOC400545 (LOC400545), mRNA
- XM 378617 Homo sapiens hypothetical gene supported by BC040918 (LOC400548), mR
- XM 378620 Homo sapiens hypothetical gene supported by AK091834 (LOC400550), mR
- XM 378621 Homo sapiens hypothetical gene supported by AK125749 (LOC400551), mR

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XM\_378623 Homo sapiens hypothetical gene supported by AK055320 (LOC400552), mR XM 378625 Homo sapiens hypothetical gene supported by AK126852 (LOC400553), mR XM 378626 Homo sapiens hypothetical gene supported by AK123554 (LOC400554), mR XM 378628 Homo sapiens hypothetical protein MGC23284 (MGC23284), mRNA XM\_378629 Homo sapiens hypothetical gene supported by AK127064 (LOC400556), mR XM\_378630 Homo sapiens hypothetical gene supported by AK055272 (LOC400557), mR XM 378631 Homo sapiens hypothetical gene supported by AK130578 (LOC400558), mR XM 378632 Homo sapiens LOC400560 (LOC400560), mRNA XM 378633 Homo sapiens LOC400561 (LOC400561), mRNA XM 378634 Homo sapiens LOC400562 (LOC400562), mRNA XM 378637 Homo sapiens LOC400565 (LOC400565), mRNA XM 378639 Homo sapiens hypothetical gene supported by AK093801 (LOC400567), mR XM 378642 Homo sapiens hypothetical protein LOC284009 (LOC284009), mRNA XM 378643 Homo sapiens hypothetical gene supported by BC043554 (LOC400568), mR XM\_378646 Homo sapiens LOC400571 (LOC400571), mRNA XM 378648 Homo sapiens LOC400572 (LOC400572), mRNA XM\_378649 Homo sapiens hypothetical gene supported by BC015790; BC041634 (LOC4 XM 378650 Homo sapiens hypothetical gene supported by BC017752 (LOC400575), mR XM 378653 Homo sapiens hypothetical gene supported by AK098696 (LOC400577), mR XM 378655 Homo saplens hypothetical protein LOC96597 (LOC96597), mRNA XM 378656 Homo sapiens hypothetical gene supported by AK093253 (LOC400579), mR XM 378660 Homo sapiens hypothetical gene supported by AK093253 (LOC400584), mR XM 378661 Homo sapiens hypothetical protein LOC339263 (LOC339263), mRNA XM\_378664 Homo sapiens hypothetical gene supported by AK124344 (LOC400588), mR XM 378667 Homo sapiens hypothetical protein LOC147004 (LOC147004), mRNA XM\_378668 Homo sapiens hypothetical gene supported by AK125932 (LOC400593), mR XM\_378675 Homo sapiens hypothetical protein LOC147093 (LOC147093), mRNA XM 378676 Homo sapiens LOC400598 (LOC400598), mRNA XM 378678 Homo saplens hypothetical gene supported by AK055254; BC051705 (LOC4 XM 378680 Homo saplens hypothetical protein LOC147080 (LOC147080), mRNA XM 378682 Homo saplens LOC400602 (LOC400602), mRNA XM 378683 Homo saplens hypothetical gene supported by AK000454 (LOC400603), mR XM\_378684 Homo sapiens hypothetical gene supported by BC039664 (LOC400604), mR XM\_378685 Homo sapiens hypothetical gene supported by BC039326 (LOC400605), mR XM\_378686 Homo saplens hypothetical gene supported by AK126827 (LOC400606), mR XM\_378687 Homo sapiens hypothetical protein LOC339210 (LOC339210), mRNA XM 378688 Homo sapiens LOC400607 (LOC400607), mRNA XM\_378689 Homo sapiens LOC400611 (LOC400611), mRNA XM\_378692 Homo saplens hypothetical gene supported by AK094767 (LOC400612), mR XM 378693 Homo sapiens LOC400614 (LOC400614), mRNA XM 378694 Homo saplens hypothetical protein LOC146784 (LOC146784), mRNA XM 378695 Homo sapiens hypothetical gene supported by BC053686 (LOC400616), mR XM 378698 Homo saplens hypothetical gene supported by AK093963 (LOC400617), mR XM 378700 Homo sapiens hypothetical gene supported by AK094963 (LOC400618), mR XM\_378701 Homo saplens hypothetical protein LOC146795 (LOC146795), mRNA XM\_378703 Homo sapiens hypothetical gene supported by AK129994 (LOC400619), mR XM\_378705 Homo sapiens hypothetical gene supported by BC035399 (LOC400620), mR XM\_378706 Homo sapiens LOC400621 (LOC400621), mRNA XM\_378708 Homo sapiens hypothetical gene supported by AK130926 (LOC400623), mR XM\_378709 Homo sapiens hypothetical gene supported by AK127023 (LOC400624), mR XM 378712 Homo sapiens hypothetical protein LOC146713 (LOC146713), mRNA

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- XM 378713 Homo sapiens hypothetical gene supported by BX648922 (LOC400626), mR
- XM 378723 Homo sapiens hypothetical protein FLJ22659 (FLJ22659), mRNA XM 378724 Homo sapiens hypothetical gene supported by AL832615 (LOC400630), mR
- XM 378727 Homo sapiens hypothetical gene supported by BC053686 (LOC400632), mR
- XM 378728 Homo sapiens LOC400633 (LOC400633), mRNA
- XM 378730 Homo sapiens LOC400638 (LOC400638), mRNA

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XM 378734 Homo sapiens hypothetical protein LOC284214 (LOC284214), mRNA XM 378735 Homo sapiens hypothetical gene supported by BC041875; BX648984 (LOC4 XM 378738 Homo sapiens hypothetical gene supported by AK095347 (LOC400643), mR XM 378741 Homo sapiens hypothetical gene supported by AK126243 (LOC400644), mR XM\_378742 Homo sapiens hypothetical gene supported by AK127888 (LOC400645), mR XM\_378743 Homo sapiens hypothetical gene supported by BX640930 (LOC400647), mR XM\_378745 Homo sapiens hypothetical gene supported by BC031271 (LOC400648), mR XM\_378746 Homo sapiens hypothetical gene supported by AK126075 (LOC400649), mR XM\_378747 Homo sapiens hypothetical gene supported by AK094936 (LOC400651), mR XM\_378750 Homo sapiens hypothetical gene supported by BC047606 (LOC400653), mR XM\_378751 Homo sapiens hypothetical gene supported by BC042493 (LOC400654), mR XM\_378753 Homo sapiens hypothetical gene supported by BC013370; BC034583 (LOC4 XM\_378754 Homo sapiens hypothetical gene supported by BC039507 (LOC400656), mR XM\_378755 Homo sapiens hypothetical gene supported by BC036588 (LOC400657), mR XM 378756 Homo sapiens hypothetical protein LOC284274 (LOC284274), mRNA XM 378757 Homo sapiens hypothetical gene supported by AK093936 (LOC400659), mR XM\_378758 Homo sapiens hypothetical gene supported by AK094957 (LOC400660), mR XM\_378760 Homo sapiens hypothetical gene supported by AK055411 (LOC400662), mR XM 378763 Homo saplens hypothetical protein LOC284240 (LOC284240), mRNA XM\_378765 Homo sapiens hypothetical gene supported by AK096031 (LOC400667), mR XM 378766 Homo sapiens LOC400669 (LOC400669), mRNA XM 378767 Homo sapiens LOC400670 (LOC400670), mRNA XM 378769 Homo sapiens LOC400671 (LOC400671), mRNA XM\_378770 Homo sapiens hypothetical gene supported by AK001151 (LOC400672), mR XM 378776 Homo sapiens LOC400675 (LOC400675), mRNA XM 378777 Homo saplens hypothetical protein LOC284385 (LOC284385), mRNA XM\_378780 Homo sapiens hypothetical protein LOC126536 (LOC126536), mRNA XM\_378783 Homo sapiens hypothetical gene supported by AK097381; BC040866 (LOC4 XM\_378784 Homo sapiens hypothetical gene supported by BC030765 (LOC400683), mR XM 378786 Homo saplens hypothetical protein LOC148145 (LOC148145), mRNA XM 378787 Homo sapiens hypothetical protein LOC284395 (LOC284395), mRNA XM 378791 Homo sapiens hypothetical protein LOC339316 (LOC339316), mRNA XM 378793 Homo sapiens hypothetical gene supported by BC000922 (LOC400684), mR XM 378794 Homo saplens hypothetical protein LOC284402 (LOC284402), mRNA XM 378795 Homo sapiens hypothetical gene supported by BC045806 (LOC400685), mR XM 378796 Homo sapiens hypothetical gene supported by AK125858 (LOC400686), mR XM\_378798 Homo sapiens hypothetical gene supported by AK092138 (LOC400690), mR XM\_378799 Homo sapiens LOC400691 (LOC400691), mRNA XM\_378800 Homo sapiens hypothetical gene supported by BC042546 (LOC400694), mR XM\_378801 Homo sapiens LOC400695 (LOC400695), mRNA XM 378804 Homo sapiens LOC400700 (LOC400700), mRNA XM\_378805 Homo sapiens LOC400701 (LOC400701), mRNA XM 378806 Homo sapiens hypothetical gene supported by AK024119 (LOC400702), mR XM 378807 Homo saplens hypothetical gene supported by AK054869 (LOC400704), mR XM 378810 Homo sapiens hypothetical gene supported by AK096622 (LOC400706), mR XM 378812 Homo sapiens hypothetical gene supported by AK130360 (LOC400710), mR XM 378815 Homo sapiens LOC400722 (LOC400722), mRNA XM 378820 Homo sapiens hypothetical gene supported by AK097327; BC037297 (LOC4 XM 378822 Homo sapiens hypothetical protein LOC254099 (LOC254099), mRNA XM\_378823 Homo sapiens hypothetical protein LOC148413 (LOC148413), mRNA XM 378824 Homo sapiens LOC400729 (LOC400729), mRNA XM\_378825 Homo sapiens hypothetical gene supported by AK097814 (LOC400730), mR XM\_378828 Homo sapiens hypothetical protein LOC115110 (LOC115110), mRNA XM 378831 Homo sapiens hypothetical gene supported by AK124708 (LOC400732), mR XM 378832 Homo sapiens hypothetical protein LOC284661 (LOC284661), mRNA XM 378835 Homo sapiens LOC400733 (LOC400733), mRNA

XM 378837 Homo sapiens hypothetical gene supported by AK091499 (LOC400738), mR

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- XM 378838 Homo sapiens hypothetical gene supported by AK125737 (LOC400739), mR XM 378840 Homo sapiens hypothetical gene supported by BC036435 (LOC400740), mR
- XM 378841 Homo sapiens LOC400741 (LOC400741), mRNA
- XM 378842 Homo sapiens hypothetical gene supported by BC033316 (LOC400742), mR XM 378843 Homo sapiens hypothetical gene supported by AK127830 (LOC400743), mR
- XM 378848 Homo sapiens PNAS-123 (LOC85028), mRNA
- XM 378852 Homo sapiens hypothetical gene supported by BC040627 (LOC400748), mR
- XM 378855 Homo sapiens hypothetical protein LOC339442 (LOC339442), mRNA
- XM 378858 Homo sapiens hypothetical protein LOC339539 (LOC339539), mRNA
- XM 378859 Homo sapiens hypothetical gene supported by BC031250 (LOC400751), mR
- XM 378860 Homo sapiens hypothetical protein LOC149478 (LOC149478), mRNA
- XM 378861 Homo sapiens hypothetical gene supported by BC006119 (LOC400752), mR XM 378862 Homo saplens LOC400753 (LOC400753), mRNA
- XM 378865 Homo sapiens hypothetical gene supported by BC030752 (LOC400756), mR
- XM 378866 Homo sapiens hypothetical protein LOC199899 (LOC199899), mRNA
- XM 378873 Homo sapiens LOC400758 (LOC400758), mRNA

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- XM 378874 Homo sapiens hypothetical gene supported by AK130864 (LOC400761), mR XM 378876 Homo sapiens hypothetical protein LOC149351 (LOC149351), mRNA
- XM\_378877 Homo sapiens hypothetical gene supported by AL832786 (LOC400762), mR
- XM 378879 Homo saplens hypothetical gene supported by AK000394 (LOC400763), mR
- XM 378880 Homo sapiens hypothetical gene supported by AK094796 (LOC400764), mR
- XM 378883 Homo saplens hypothetical gene supported by BC051808 (LOC400768), mR XM 378886 Homo sapiens hypothetical protein LOC284475 (LOC284475), mRNA
- XM 378889 Home sapiens hypothetical gene supported by AK090412 (LOC400770), mR
- XM 378890 Homo sapiens hypothetical gene supported by AK098337; BC022881 (LOC4
- XM\_378891 Homo saplens hypothetical gene supported by BC012753 (LOC400772), mR
- XM\_378892 Homo saplens LOC400775 (LOC400775), mRNA
- XM 378893 Homo sapiens hypothetical gene supported by AK125616 (LOC400777), mR
- XM\_378894 Homo saplens LOC400778 (LOC400778), mRNA
- XM 378897 Homo sapiens LOC400781 (LOC400781), mRNA
- XM 378898 Homo sapiens LOC400782 (LOC400782), mRNA XM 378899 Homo sapiens LOC400783 (LOC400783), mRNA
- XM 378901 Homo sapiens hypothetical gene supported by M60502 (LOC400786), mRN/
- XM 378903 Homo sapiens LOC400789 (LOC400789), mRNA
- XM\_378905 Homo saplens hypothetical gene supported by AK094742; AK128347 (LOC4 XM 378908 Homo sapiens hypothetical gene supported by AK125122 (LOC400793), mR
- XM 378909 Homo sapiens hypothetical gene supported by BC030596 (LOC400794), mR
- XM 378910 Homo sapiens hypothetical gene supported by AK000073 (LOC400795), mR XM\_378912 Homo saplens hypothetical protein LOC284688 (LOC284688), mRNA
- XM\_378914 Homo sapiens KIAA0492 protein (KIAA0492), mRNA XM 378917 Homo sapiens LOC400796 (LOC400796), mRNA
- XM 378918 Homo sapiens hypothetical gene supported by AK125993 (LOC400797), mR
- XM 378919 Homo sapiens hypothetical gene supported by AK092849 (LOC400798), mR
- XM 378921 Homo sapiens hypothetical protein LOC148756 (LOC148756), mRNA
- XM 378923 Homo saplens hypothetical protein LOC339476 (LOC339476), mRNA XM 378925 Homo sapiens hypothetical gene supported by AK125573 (LOC400800), mR
- XM 378930 Homo sapiens hypothetical gene supported by AK097184 (LOC400801), mR
- XM 378933 Homo sapiens LOC400802 (LOC400802), mRNA
- XM 378934 Homo sapiens LOC400803 (LOC400803), mRNA XM\_378941 Homo sapiens hypothetical protein LOC339535 (LOC339535), mRNA
- XM\_378945 Homo sapiens hypothetical protein LOC149134 (LOC149134), mRNA XM\_378946 Homo sapiens hypothetical gene supported by AK096414 (LOC400812), mR
- XM 378947 Homo sapiens LOC400813 (LOC400813), mRNA
- XM 378949 Homo sapiens similar to hypothetical protein LOC148413 (LOC400817), mRI XM 378950 Homo saplens hypothetical gene supported by AK097814 (LOC400819), mR
- XM 378951 Homo sapiens hypothetical protein LOC284628 (LOC284628), mRNA
- XM 378954 Homo sapiens hypothetical gene supported by AK125616 (LOC400828), mR

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XM 378955 Homo sapiens LOC400829 (LOC400829), mRNA

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- XM 378956 Homo sapiens hypothetical gene supported by AK092524 (LOC400831), mR
- XM 378957 Homo sapiens LOC400832 (LOC400832), mRNA XM 378961 Homo sapiens LOC400835 (LOC400835), mRNA
- XM 378964 Homo sapiens hypothetical protein LOC339593 (LOC339593), mRNA
- XM 378969 Homo sapiens hypothetical protein LOC284788 (LOC284788), mRNA
- XM 378970 Homo sapiens hypothetical gene supported by AK090900 (LOC400839), mR
- XM 378971 Homo sapiens hypothetical protein LOC284798 (LOC284798), mRNA
- XM 378973 Homo sapiens hypothetical protein LOC284801 (LOC284801), mRNA
- XM 378974 Homo sapiens hypothetical gene supported by AK127732 (LOC400841), mR
- XM 378976 Homo sapiens LOC400843 (LOC400843), mRNA
- Homo sapiens hypothetical gene supported by AK124127 (LOC400844), mR XM 378977
- XM 378978 Homo sapiens hypothetical gene supported by AK090932 (LOC400845), mR
- XM 378980 Homo sapiens hypothetical protein LOC339568 (LOC339568), mRNA
- XM\_378981 Homo sapiens hypothetical gene supported by AK127953 (LOC400846), mR XM\_378982 Homo sapiens hypothetical gene supported by AL832259; BC035164 (LOC4
- XM 378983 Homo sapiens hypothetical protein LOC284749 (LOC284749), mRNA
- XM 378985 Homo sapiens hypothetical protein LOC284751 (LOC284751), mRNA
- XM 378988 Homo sapiens LOC400849 (LOC400849), mRNA
- XM\_378989 Homo saplens hypothetical gene supported by AK126744 (LOC400850), mR XM\_378992 Homo sapiens hypothetical gene supported by BC015673 (LOC400851), mR
- XM 378993 Homo sapiens hypothetical gene supported by AK124784 (LOC400852), mR
- XM 378994 Homo sapiens hypothetical gene supported by AK125376 (LOC400853), mR
- XM 379002 Homo saplens LOC400861 (LOC400861), mRNA
- XM 379003 Homo saplens LOC400862 (LOC400862), mRNA
- XM\_379004 Homo sapiens hypothetical gene supported by AK127913 (LOC400863), mR
- XM\_379006 Homo sapiens hypothetical gene supported by AK094771 (LOC400865), mR XM\_379009 Homo saplens hypothetical gene supported by AY204750 (LOC400866), mR
- XM 379011 Homo saplens hypothetical protein LOC284835 (LOC284835), mRNA
- XM\_379012 Homo sapiens hypothetical gene supported by BC033260 (LOC400868), mR
- XM 379014 Homo sapiens LOC400869 (LOC400869), mRNA
- XM 379015 Homo sapiens hypothetical gene supported by AK123727 (LOC400870), mR XM 379016 Homo saplens hypothetical gene supported by AK057962 (LOC400871), mR
- XM\_379017 Homo sapiens LOC400872 (LOC400872), mRNA
- XM\_379018 Homo saplens hypothetical gene supported by BX648824 (LOC400873), mR
- XM 379020 Homo sapiens hypothetical gene supported by AK096268 (LOC400874), mR XM 379021 Homo sapiens chromosome 21 open reading frame 30 (C21orf30), mRNA
- XM 379022 Homo sapiens hypothetical gene supported by BC040064 (LOC400875), mR XM 379023 Homo saplens hypothetical gene supported by BC036902 (LOC400876), mR
- XM 379025 Homo saplens LOC400877 (LOC400877), mRNA
- XM\_379029 Homo sapiens hypothetical gene supported by AK096951 (LOC400879), mR
- XM\_379030 Homo sapiens hypothetical gene supported by AY338954 (LOC400880), mR XM\_379032 Homo sapiens hypothetical gene supported by BC021738 (LOC400885), mR
- XM\_379036 Homo saplens LOC400890 (LOC400890), mRNA
- XM 379040 Homo sapiens hypothetical gene supported by AK097628 (LOC400919), mR
- XM 379041 Homo sapiens hypothetical gene supported by BC040576 (LOC400920), mR
- XM 379044 Homo sapiens hypothetical protein LOC284898 (LOC284898), mRNA
- XM 379046 Homo sapiens LOC400923 (LOC400923), mRNA
- XM 379052 Homo sapiens hypothetical gene supported by AK075161 (LOC400926), mR
- XM 379054 Homo sapiens hypothetical protein LOC339674 (LOC339 674), mRNA
- XM 379055 Homo sapiens hypothetical gene supported by AK130208 (LOC400929), mR
- XM 379060 Homo sapiens hypothetical protein LOC339685 (LOC339685), mRNA
- XM 379064 Homo sapiens hypothetical protein LOC284933 (LOC284933), mRNA
- XM\_379065 Homo sapiens hypothetical gene supported by BC033837 (LOC400933), mR XM 379068 Homo sapiens hypothetical gene supported by BC055007 (LOC400937), mR
- XM\_379069 Homo sapiens hypothetical protein LOC339822 (LOC339822), mRNA
- XM 379072 Homo sapiens LOC400939 (LOC400939), mRNA

XM 379073 Homo sapiens hypothetical protein LOC386597 (LOC386597), mRNA XM 379074 Homo sapiens hypothetical protein LOC339788 (LOC339788), mRNA XM 379075 Homo saplens hypothetical gene supported by BX64 1130 (LOC400942), mR XM 379077 Homo sapiens LOC400944 (LOC400944), mRNA XM 379078 Homo sapiens hypothetical gene supported by AK123475 (LOC400945), mR XM\_379079 Homo sapiens hypothetical gene supported by AK022396; AK097927 (LOC4 XM\_379080 Homo sapiens LOC400947 (LOC400947), mRNA XM\_379085 Homo sapiens hypothetical protein LOC285043 (LOC285043), mRNA XM 379086 Homo sapiens hypothetical protein LOC285045 (LOC285045), mRNA XM 379089 Homo sapiens LOC400951 (LOC400951), mRNA XM 379094 Homo sapiens hypothetical gene supported by BX647332 (LOC400953), mR XM 379096 Homo sapiens hypothetical gene supported by AL832565 (LOC400955), mR XM 379097 Homo sapiens hypothetical gene supported by AK122786 (LOC400957), mR XM 379098 Homo sapiens hypothetical protein LOC339803 (LOC339803), mRNA XM\_379099 Homo sapiens hypothetical protein LOC339807 (LOC339807), mRNA XM\_379100 Homo sapiens hypothetical gene supported by BC037562 (LOC400958), mR XM 379101 Homo sapiens hypothetical gene supported by BC033059 (LOC400959), mR XM\_379102 Homo sapiens hypothetical gene supported by BC040598 (LOC400960), mR XM\_379106 Homo sapiens hypothetical gene supported by BC044795 (LOC400964), mR XM\_379108 Homo sapiens LOC400969 (LOC400969), mRNA XM 379109 Homo sapiens hypothetical gene supported by AK127783 (LOC400983), mR XM 379111 Homo sapiens hypothetical protein LOC285033 (LOC285033), mRNA XM 379112 Homo saplens LOC400988 (LOC400988), mRNA XM 379113 Homo saplens hypothetical gene supported by BC040181 (LOC400990), mR XM 379114 Homo sapiens hypothetical protein LOC150577 (LOC150577), mRNA XM 379117 Homo sapiens hypothetical protein LOC150568 (LOC150568), mRNA XM\_379118 Homo sapiens hypothetical gene supported by AK095498 (LOC400992), mR XM\_379119 Homo sapiens hypothetical protein LOC285000 (LO C285000), mRNA XM\_379121 Homo sapiens hypothetical gene supported by AK056084; AK095678; NM\_1 XM\_379122 Homo saplens hypothetical gene supported by AK125994 (LOC400997), mR XM\_379123 Homo sapiens hypothetical gene supported by AK124342 (LOC400999), mR XM\_379131 Homo saplens LOC401001 (LOC401001). mRNA XM\_379133 Homo sapiens hypothetical protein LOC151121 (LOC151121), mRNA XM 379135 Homo saplens hypothetical gene supported by AK093281 (LOC401005), mR XM 379136 Homo sapiens hypothetical gene supported by AK093281 (LOC401006), mR XM 379141 Homo saplens hypothetical gene supported by BC043549; BX648102 (LOC4 XM 379145 Homo sapiens hypothetical gene supported by AK092134 (LOC401020), mR XM 379146 Homo saplens hypothetical gene supported by BC047605 (LOC401021), mR XM 379147 Homo saplens hypothetical gene supported by BC030713; BC047481 (LOC4 XM 379149 Homo sapiens LOC401025 (LOC401025), mRNA XM\_379154 Homo sapiens hypothetical protein LOC151300 (LOC151300), mRNA XM\_379156 Homo sapiens LOC401032 (LOC401032), mRNA XM\_379158 Homo sapiens hypothetical gene supported by AK055016 (LOC401033), mR XM\_379159 Homo sapiens hypothetical protein LOC151484 (LOC151484), mRNA XM\_379161 Homo sapiens hypothetical gene supported by AK056246 (LOC401037), mR XM 379163 Homo sapiens hypothetical gene supported by AK057585 (LOC401038), mR XM 379164 Homo sapiens hypothetical protein LOC151171 (LOC151171), mRNA XM 379166 Homo saplens hypothetical gene supported by AK056439 (LOC401041), mR XM 379167 Homo sapiens LOC401042 (LOC401042), mRNA XM\_379168 Homo sapiens LOC401043 (LOC401043), mRNA XM 379169 Homo sapiens hypothetical gene supported by AK098031 (LOC401044), mR XM\_379170 Homo saplens LOC401046 (LOC401046), mRNA XM 379171 Homo sapiens LOC401048 (LOC401048), mRNA XM\_379172 Homo sapiens hypothetical gene supported by AK124857 (LOC401049), mR

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- XM 379173 Homo saplens hypothetical gene supported by AK124088 (LOC401050), mR XM 379174 Homo sapiens LOC401051 (LOC401051), mRNA
- XM 379175 Homo sapiens hypothetical gene supported by AK022260 (LOC401052), mR

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XM\_379177 Homo sapiens hypothetical gene supported by BC041425 (LOC401053), mR XM 379179 Homo sapiens hypothetical protein LOC152274 (LOC152274), mRNA XM 379180 Homo sapiens LOC401056 (LOC401056), mRNA XM 379181 Homo sapiens LOC401057 (LOC401057), mRNA XM 379182 Homo sapiens LOC401058 (LOC401058), mRNA XM 379183 Homo sapiens hypothetical protein LOC152024 (LOC152024), mRNA XM\_379184 Homo sapiens hypothetical gene supported by AK096885; AK098084 (LOC4 XM 379189 Homo sapiens hypothetical gene supported by AK057338 (LOC401061), mR XM 379190 Homo sapiens hypothetical gene supported by AK092973 (LOC401062), mR XM 379191 Homo sapiens LOC401065 (LOC401065), mRNA XM 379192 Homo sapiens LOC401066 (LOC401066), mRNA XM 379194 Homo saniens hypothetical gene supported by BC028186 (LOC401068), mR XM 379195 Homo saniens hypothetical protein LOC285401 (LOC285401), mRNA XM 379196 Homo saniens hypothetical protein LOC151877 (LOC151877), mRNA XM\_379197 Homo sapiens hypothetical gene supported by AL832401 (LOC401073), mR XM 379198 Homo sapiens hypothetical protein LOC285286 (LOC285286), mRNA XM 379200 Homo sapiens LOC401078 (LOC401078), mRNA XM 379201 Homo sapiens LOC401079 (LOC401079), mRNA XM 379203 Homo sapiens hypothetical protein LOC348801 (LOC348801), mRNA XM 379204 Homo sapiens hypothetical protein LOC152225 (LOC152225), mRNA XM 379205 Homo sapiens hypothetical protein LOC151658 (LOC151658), mRNA XM 379206 Homo sapiens hypothetical gene supported by AK026416 (LOC401081), mR XM 379207 Homo sapiens hypothetical protein LOC285194 (LOC285194), mRNA XM\_379210 Homo sapiens LOC401085 (LOC401085), mRNA XM 379213 Homo saplens LOC401086 (LOC401086), mRNA XM 379214 Homo sapiens hypothetical protein LOC339942 (LOC339942), mRNA XM 379215 Homo sapiens hypothetical protein LOC132241 (LOC132241), mRNA XM 379228 Homo sapiens LOC401093 (LOC401093), mRNA XM 379229 Homo sapiens LOC401094 (LOC401094), mRNA XM 379230 Homo sapiens hypothetical protein LOC339894 (LOC339894), mRNA XM 379231 Homo sapiens hypothetical gene supported by BC034803 (LOC401098), mR XM 379233 Homo saplens LOC401099 (LOC401099), mRNA XM 379234 Homo saplens LOC401101 (LOC401101), mRNA XM\_379235 Homo sapiens hypothetical gene supported by AK127955 (LOC401103), mR XM\_379240 Homo sapiens LOC401104 (LOC401104), mRNA XM 379243 Homo saplens hypothetical gene supported by AK091527 (LOC401106), mR XM 379244 Homo sapiens hypothetical gene supported by AK127609 (LOC401107), mR XM 379247 Homo sapiens hypothetical gene supported by AK128780; AL137733 (LOC4) XM 379248 Homo sapiens hypothetical gene supported by AK098259 (LOC401112), mR XM 379249 Homo saplens hypothetical gene supported by AK123125 (LOC401113), mR XM 379250 Homo sapiens hypothetical gene supported by BC038466; BC062790 (LOC4 XM 379252 Homo sapiens hypothetical gene supported by BC017173 (LOC401117), mR XM 379254 Homo sapiens hypothetical protein LOC339988 (LOC339988), mRNA XM 379255 Homo saplens hypothetical gene supported by AK094096 (LOC401119), mR XM 379256 Homo sapiens hypothetical gene supported by AK127863 (LOC401120), mR XM 379258 Homo sapiens hypothetical protein LOC285547 (LOC285547), mRNA XM 379260 Homo sapiens hypothetical protein LOC152742 (LOC152742), mRNA XM 379262 Homo sapiens LOC401124 (LOC401124), mRNA XM 379263 Homo sapiens LOC401126 (LOC401126), mRNA XM 379264 Homo sapiens LOC401128 (LOC401128), mRNA XM 379265 Homo sapiens LOC401129 (LOC401129), mRNA XM 379267 Homo sapiens hypothetical gene supported by BC040544 (LOC401134), mR XM 379268 Homo sapiens hypothetical gene supported by AK093682; AK129519 (LOC4 XM 379270 Homo sapiens casein alpha s2-like A (CSN1S2A), mRNA

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XM\_379270 From sapiens Laserii alpira szeniez ACORTO-267, TIMON XM\_379273 Homo sapiens hypothetical gene supported by AK024248; AL137733 (LOC4 XM\_379274 Homo sapiens hypothetical gene supported by BC062741 (LOC401151), mR

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XM\_379275 Homo sapiens LOC401153 (LOC401153), mRNA XM\_379276 Homo saplens hypothetical gene supported by AK123449; BX64 1014 (LOC4 XM\_379278 Homo sapiens LOC401156 (LOC401156), mRNA XM\_379280 Homo sapiens hypothetical protein LOC285422 (LOC285422), mRNA XM 379287 Homo sapiens LOC401159 (LOC401159), mRNA XM 379288 Homo sapiens hypothetical protein LOC340017 (LOC340017), mRNA XM 379294 Homo sapiens similar to hypothetical protein DKFZp762K222 (LOC401163), XM\_379295 Homo sapiens hypothetical protein LOC285441 (LOC285441), mRNA XM\_379298 Homo sapiens hypothetical gene supported by AY494056 (LOC-401164), mR XM\_379299 Homo saplens hypothetical gene supported by BC029568 (LOC401165), mR XM\_379303 Homo sapiens hypothetical gene supported by AK126199 (LOC401168), mR XM\_379306 Homo sapiens hypothetical gene supported by BC034612 (LOC401169), mR XM\_379309 Homo sapiens hypothetical gene supported by BC035019 (LOC401171), mR XM\_379313 Homo sapiens hypothetical gene supported by AK126802 (LOC401173), mR XM\_379317 Homo sapiens LOC401175 (LOC401175), mRNA XM\_379318 Homo sapiens hypothetical gene supported by BC043001 (LOC-401176), mR XM\_379320 Homo saplens hypothetical gene supported by BC052942 (LOC-401177), mR XM 379321 Homo sapiens hypothetical protein LOC340107 (LOC340107), mRNA XM 379322 Homo sapiens hypothetical protein LOC340109 (LOC340109), mRNA XM\_379323 Homo sapiens LOC401178 (LOC401178), mRNA XM\_379324 Homo sapiens hypothetical protein LOC340113 (LOC340113), mRNA XM\_379325 Homo saplens LOC401180 (LOC401180), mRNA XM\_379326 Homo saplens hypothetical gene supported by BC028978 (LOC401181), mR XM\_379327 Homo sapiens LOC401182 (LOC401182), mRNA XM\_379328 Homo saplens LOC401184 (LOC401184), mRNA XM\_379331 Homo saplens hypothetical gene supported by AK057759 (LOC401185), mR XM 379332 Homo sapiens LOC401186 (LOC401186), mRNA XM 379333 Homo saplens LOC401187 (LOC401187), mRNA XM\_379334 Homo saplens hypothetical protein LOC257396 (LOC257396), mRNA XM\_379336 Homo saplens hypothetical gene supported by AK091013 (LOC401188), mR XM\_379339 Homo saplens LOC401199 (LOC401199), mRNA XM\_379340 Homo sapiens hypothetical protein LOC285713 (LOC285713), mRNA XM\_379343 Homo sapiens hypothetical gene supported by AK092258 (LOC401201), mR XM\_379347 Homo sapiens LOC401203 (LOC401203), mRNA XM\_379355 Homo sapiens hypothetical protein LOC340074 (LOC340074), mRNA XM\_379359 Homo sapiens hypothetical gene supported by AK022326 (LOC-401210), mR XM\_379363 Homo sapiens hypothetical gene supported by BX640700 (LOC401212), mR XM\_379364 Homo sapiens hypothetical gene supported by AK127910 (LOC401213), mR XM\_379366 Homo sapiens hypothetical gene supported by AK092848; AK1 23816 (LOC4 XM\_379368 Homo sapiens LOC401215 (LOC401215), mRNA XM\_379371 Homo sapiens hypothetical protein LOC285626 (LOC285626), mRNA XM\_379372 Homo sapiens hypothetical gene supported by BC039501 (LOC401216), mR XM\_379373 Homo sapiens hypothetical protein LOC257358 (LOC257358), mRNA XM\_379377 Homo saplens hypothetical gene supported by BX649016 (LOC401219), mR XM\_379378 Homo saplens hypothetical gene supported by BC036933 (LOC401220), mR XM\_379380 Homo sapiens hypothetical gene supported by BC036933 (LOC401222), mR XM\_379381 Homo sapiens hypothetical gene supported by AK055745 (LOC401225), mR XM\_379382 Homo sapiens hypothetical gene supported by AK093197; BCO40992 (LOC4 XM\_379384 Homo saplens hypothetical protein LOC285766 (LOC285766), mRNA XM\_379386 Homo saplens hypothetical protein LOC285768 (LOC285768), mRNA XM\_379391 Homo sapiens hypothetical gene supported by AK128409 (LOC401230), mR XM\_379392 Homo sapiens hypothetical gene supported by AK023629 (LOC401231), mR XM\_379393 Homo sapiens hypothetical gene supported by BX640709 (LOC401232), mR XM\_379395 Homo sapiens hypothetical gene supported by BC014487 (LOC401234), mR XM\_379396 Homo sapiens hypothetical protein LOC221710 (LOC221710), mRNA XM\_379398 Homo sapiens hypothetical gene supported by AK026189 (LOC401237), mR

XM\_379401 Homo sapiens LOC401241 (LOC401241), mRNA

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XM 379402 Homo sapiens hypothetical gene supported by AK055503 (LOC401242), mR XM 379403 Homo sapiens chromosome 6 open reading frame 12 (C6orf12), mRNA XM 379404 Homo sapiens hypothetical gene supported by AK055657 (LOC401245), mR XM 379406 Homo sapiens hypothetical gene supported by AL832447 (LOC401254), mR XM 379408 Homo sapiens LOC401255 (LOC401255), mRNA XM 379409 Homo sapiens hypothetical gene supported by BX648112 (LOC401256), mR XM 379410 Homo sapiens hypothetical gene supported by BC034770 (LOC401257), mR XM\_379411 Homo sapiens hypothetical gene supported by AK125083 (LOC401258), mR XM\_379413 Homo sapiens hypothetical gene supported by AK098234 (LOC401261), mR XM 379417 Homo sapiens hypothetical gene supported by AK095117 (LOC401264), mR XM 379424 Homo sapiens LOC401268 (LOC401268), mRNA XM 379430 Homo sapiens hypothetical protein LOC285758 (LOC285758), mRNA XM 379432 Homo sapiens hypothetical protein LOC285733 (LOC285733), mRNA XM 379433 Homo sapiens hypothetical protein LOC285735 (LOC285735), mRNA XM 379434 Homo sapiens hypothetical protein LOC154092 (LOC154092), mRNA XM 379435 Homo sapiens hypothetical gene supported by AK128874 (LOC401275), mR XM 379436 Homo sapiens hypothetical gene supported by BC038188 (LOC401276), mR XM\_379437 Homo saplens hypothetical protein LOC153910 (LOC153910), mRNA XM 379438 Homo sapiens hypothetical protein LOC285740 (LOC285740), mRNA XM\_379439 Homo sapiens LOC401277 (LOC401277), mRNA XM\_379441 Homo sapiens LOC401279 (LOC401279), mRNA XM\_379450 Homo sapiens hypothetical gene supported by AK130765 (LOC401281), mR XM\_379452 Homo sapiens hypothetical gene supported by AL831931 (LOC401282), mR XM\_379453 Homo saplens hypothetical gene supported by AL832143 (LOC401283), mR XM\_379454 Homo sapiens hypothetical gene supported by AK095077 (LOC401284), mR XM\_379456 Homo sapiens hypothetical protein LOC154222 (LOC154222), mRNA Homo saplens hypothetical gene supported by BX648586 (LOC401287), mR XM 379458 Homo sapiens hypothetical gene supported by AK095441 (LOC401289), mR XM 379459 XM\_379460 Homo saplens hypothetical gene supported by AL832760 (LOC401290), mR XM\_379461 Homo sapiens LOC401291 (LOC401291), mRNA XM\_379462 Homo saplens hypothetical gene supported by BC064362: BX537893 (LOC4 XM 379463 Homo sapiens similar to hypothetical protein LOC154222 (LOC401294), mRI XM 379467 Homo sapiens hypothetical gene supported by AK125766 (LOC401296), mR XM 379469 Homo sapiens hypothetical gene supported by BC032734 (LOC401297), mR Homo saplens LOC401299 (LOC401299), mRNA XM 379471 XM 379472 Homo saplens LOC401301 (LOC401301), mRNA XM 379474 Homo sapiens hypothetical gene supported by AK127500 (LOC401310), mR XM 379476 Homo sapiens hypothetical gene supported by BC039682 (LOC401312), mR Homo saplens hypothetical protein LOC285941 (LOC285941). mRNA XM 379477 XM\_379478 Homo sapiens hypothetical gene supported by AK093987 (LOC401315), mR XM 379479 Homo sapiens LOC401317 (LOC401317), mRNA XM 379480 Homo sapiens LOC401318 (LOC401318), mRNA XM 379481 Homo sapiens hypothetical gene supported by BC023581; BC044638 (LOC4 XM 379482 Homo sapiens hypothetical gene supported by BC016976 (LOC401320), mR XM 379483 Homo sapiens hypothetical gene supported by AK092714 (LOC401321), mR XM 379484 Homo sapiens hypothetical gene supported by AL832092 (LOC401324), mR XM 379485 Homo sapiens LOC401328 (LOC401328), mRNA XM 379486 Homo sapiens hypothetical protein LOC285958 (LOC285958), mRNA XM 379487 Homo sapiens hypothetical gene supported by AK125311 (LOC401334), mR XM\_379488 Homo sapiens hypothetical gene supported by AK024248; AL137733; BC06; XM 379489 Homo sapiens LOC401345 (LOC401345), mRNA XM 379490 Homo sapiens LOC401346 (LOC401346), mRNA XM 379491 Homo sapiens LOC401348 (LOC401348), mRNA XM 379492 Homo sapiens hypothetical gene supported by BX648489 (LOC401349), mR XM 379493 Homo sapiens LOC401352 (LOC401352), mRNA

XM\_379494 Homo sapiens LOC401353 (LOC401353), mRNA XM\_379495 Homo sapiens LOC401358 (LOC401358), mRNA

- XM\_379496 Homo sapiens LOC401359 (LOC401359), mRNA XM 379498 Homo sapiens LOC401363 (LOC401363), mRNA XM\_379499 Homo sapiens hypothetical gene supported by AK024371; BC037920 (LOC4 XM\_379500 Homo sapiens hypothetical gene supported by AK054923; AK126730; NM\_0 XM 379501 Homo sapiens LOC401367 (LOC401367), mRNA XM 379502 Homo sapiens LOC401368 (LOC401368), mRNA XM 379503 Homo sapiens LOC401371 (LOC401371), mRNA XM 379504 Homo sapiens hypothetical gene supported by AK024602 (LOC401380), rmR XM 379506 Homo sapiens LOC401384 (LOC401384), mRNA XM 379507 Homo sapiens LOC401385 (LOC401385), mRNA XM 379508 Homo sapiens LOC401386 (LOC401386), mRNA XM 379510 Homo sapiens hypothetical protein FLJ34048 (FLJ34048), mRNA XM 379511 Homo sapiens LOC401390 (LOC401390), mRNA XM\_379512 Homo sapiens LOC401394 (LOC401394), mRNA XM\_379513 Homo sapiens LOC401396 (LOC401396), mRNA XM\_379514 Homo sapiens hypothetical protein LOC340340 (LOC340340), mRNA XM\_379515 Homo saplens hypothetical gene supported by BX537645 (LOC401397), rnR XM\_379516 Homo sapiens hypothetical gene supported by BX648695 (LOC401398), mR XM\_379517 Homo sapiens hypothetical gene supported by BC063892 (LOC401399), mR XM 379518 Homo saplens LOC401400 (LOC401400), mRNA XM 379520 Homo sapiens hypothetical protein FLJ43663 (FLJ43663), mRNA XM 379521 Homo saplens LOC401405 (LOC401405), mRNA XM 379522 Homo sapiens LOC401406 (LOC401406), mRNA XM 379523 Homo sapiens LOC401407 (LOC401407), mRNA XM 379524 Homo sapiens LOC401408 (LOC401408), mRNA XM\_379526 Homo sapiens hypothetical gene supported by BX648692 (LOC401410), mR XM\_379527 Homo saplens hypothetical gene supported by BC023225 (LOC401431), mR XM\_379528 Homo sapiens hypothetical protein LOC90520 (LOC90520), mRNA XM 379529 Homo sapiens LOC401432 (LOC401432), mRNA XM 379530 Homo sapiens hypothetical protein LOC285972 (LOC285972), mRNA XM\_379531 Homo sapiens LOC401434 (LOC401434), mRNA XM\_379532 Homo sapiens LOC401435 (LOC401435), mRNA XM\_379533 Homo sapiens LOC401436 (LOC401436), mRNA XM 379534 Homo saplens hypothetical gene supported by AK054822 (LOC401437), mR XM\_379535 Homo sapiens hypothetical protein LOC285889 (LOC285889), mRNA XM\_379536 Homo sapiens hypothetical gene supported by BC041429 (LOC401438), mR XM\_379537 Homo sapiens hypothetical gene supported by AY166699 (LOC401439), rnR XM 379539 Homo saplens LOC401440 (LOC401440), mRNA XM 379540 Homo sapiens hypothetical protein LOC157693 (LOC157693), mRNA XM\_379541 Homo saplens hypothetical gene supported by AK127852 (LOC401441), mR XM\_379543 Homo saplens hypothetical gene supported by BC028401 (LOC401442), mR XM\_379545 Homo sapiens hypothetical gene supported by BC030648 (LOC401443), mR XM 379547 Homo sapiens hypothetical gene supported by AK057888 (LOC401445), mR XM 379548 Homo sapiens hypothetical gene supported by AK124896; BC037255 (LOC4 XM 379550 Homo sapiens hypothetical gene supported by AK091259 (LOC401448), mR XM\_379551 Homo sapiens hypothetical protein LOC349196 (LOC349196), mRNA XM 379552 Homo sapiens LOC401449 (LOC401449), mRNA XM 379553 Homo sapiens similar to hypothetical protein LOC157278 (LOC401451), mRI XM 379554 Homo sapiens hypothetical protein LOC157273 (LOC157273), mRNA XM 379559 Homo sapiens hypothetical protein LOC157278 (LOC157278), mRNA XM 379562 Homo sapiens LOC401456 (LOC401456), mRNA XM 379573 Homo sapiens hypothetical protein LOC286135 (LOC286135), mRNA XM 379582 Homo sapiens hypothetical protein LOC286177 (LOC286177), mRNA XM\_379583 Homo sapiens hypothetical gene supported by AK124256 (LOC401462), mR
  - XM\_379583 Homo sapiens hypothetical gene supported by AK124256 (LOC401462), TRK XM\_379584 Homo sapiens hypothetical gene supported by BC022555; BC050012 (LOC4
  - XM\_379584 Homo sapiens hypothetical gene supported by BC022555; BC050012 (LOC4 XM\_379586 Homo sapiens hypothetical protein LOC286186 (LOC286186), mRNA
  - XM 379587 Homo sapiens LOC401464 (LOC401464), mRNA

XM 379592 Homo sapiens hypothetical protein LOC286144 (LOC286144), mRNA XM 379594 Homo sapiens hypothetical protein LOC286149 (LOC286149), mRNA XM 379595 Homo sapiens hypothetical gene supported by AK125891 (LOC401471), mR XM 379596 Homo sapiens LOC401473 (LOC401473), mRNA XM 379597 Homo sapiens hypothetical protein FLJ10489 (FLJ10489), mRNA XM 379601 Homo sapiens hypothetical gene supported by BC036187; NM\_005839 (LOC XM 379603 Homo sapiens hypothetical gene supported by BC009730; BC015157 (LOC4 XM 379605 Homo sapiens LOC401477 (LOC401477), mRNA XM\_379608 Homo sapiens hypothetical gene supported by AK056998 (LOC401480), mR XM\_379609 Homo sapiens hypothetical gene supported by BC041936 (LOC401481), mR XM\_379610 Homo sapiens LOC401482 (LOC401482), mRNA XM 379617 Homo sapiens hypothetical gene supported by AK093004 (LOC401488), mR XM 379618 Homo sapiens hypothetical gene supported by AY343891; AY343892; AY34: XM\_379619 Homo sapiens hypothetical gene supported by BC052949 (LOC401490), mR XM\_379622 Homo sapiens hypothetical gene supported by AK092343 (LOC401491), mR XM 379623 Homo sapiens hypothetical gene supported by AK123194 (LOC401492), mR XM\_379625 Homo saplens hypothetical gene supported by BC048267; NM\_178448 (LOC XM 379627 Homo sapiens LOC401496 (LOC401496), mRNA XM 379628 Homo sapiens LOC401499 (LOC401499), mRNA XM\_379629 Homo saplens hypothetical gene supported by AL512690 (LOC401500), mR XM\_379630 Homo sapiens LOC401503 (LOC401503), mRNA XM\_379632 Homo sapiens hypothetical protein LOC158376 (LOC158376), mRNA XM\_379634 Homo saplens hypothetical gene supported by AK091718 (LOC401504), mR XM 379635 Homo saplens LOC401506 (LOC401506), mRNA XM 379636 Homo sapiens hypothetical protein LOC158228 (LOC158228), mRNA XM 379637 Homo sapiens hypothetical gene supported by AK127732 (LOC401513), mR XM 379638 Homo sapiens hypothetical gene supported by AK026419 (LOC401518), mR XM 379639 Homo sapiens LOC401522 (LOC401522), mRNA XM 379640 Homo sapiens hypothetical gene supported by BC044751; NM\_175923 (LOC XM\_379641 Homo sapiens hypothetical gene supported by BC062724 (LOC401 527), mR XM\_379642 Homo saplens hypothetical gene supported by BC032955 (LOC401528), mR XM\_379643 Homo sapiens hypothetical gene supported by BC032955 (LOC401530), mR XM\_379644 Homo saplens hypothetical gene supported by BC000228 (LOC401532), mR XM\_379645 Homo sapiens hypothetical gene supported by AK094988 (LOC401 536), mR XM\_379647 Homo saplens similar to hypothetical protein LOC286238 (LOC401538), mRI XM 379648 Homo sapiens hypothetical gene supported by AK124333 (LOC401539), mR XM 379650 Homo sapiens hypothetical protein LOC340515 (LOC340515), mRNA XM 379651 Homo sapiens chromosome 9 open reading frame 44 (C9orf44), mRNA XM\_379655 Homo sapiens hypothetical gene supported by BC031969 (LOC401542), mR XM\_379656 Homo saplens hypothetical gene supported by AK092137 (LOC401 543), mR XM\_379657 Homo saplens hypothetical gene supported by BC043559 (LOC401 544), mR XM\_379660 Homo saplens LOC401545 (LOC401545), mRNA XM\_379664 Homo sapiens hypothetical gene supported by BX647840 (LOC401 549), mR XM\_379665 Homo sapiens hypothetical protein LOC286333 (LOC286333), mRNA XM\_379667 Homo sapiens hypothetical gene supported by BC039180 (LOC401550), mR XM\_379668 Homo sapiens hypothetical gene supported by AK124723; AL8335O9 (LOC4 XM\_379671 Homo sapiens hypothetical gene supported by BC019073; BC036842; BC04 XM\_379672 Homo sapiens hypothetical gene supported by AK128673 (LOC401 554), mR XM 379676 Homo sapiens hypothetical gene supported by AK127261 (LOC401557), mR XM 379677 Homo sapiens hypothetical gene supported by AK094119 (LOC401558), mR XM\_379678 Homo sapiens hypothetical gene supported by BC029166 (LOC401559), mR XM\_379680 Homo sapiens hypothetical gene supported by AK023162 (LOC90120), mRN XM\_379682 Homo sapiens hypothetical gene supported by AY129027 (LOC401561), mR XM 379684 Homo sapiens hypothetical protein LOC286238 (LOC286238), mRNA XM\_379686 Homo sapiens hypothetical gene supported by AK074437 (LOC401571), mR

XM\_379688 Homo sapiens hypothetical gene supported by BX648912 (LOC401573), mR XM\_379690 Homo sapiens hypothetical protein LOC284593 (LOC284593), mRNA

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 XM_379692 Homo saplens LOC401574 (LOC401574), mRNA
 XM_379693 Homo sapiens LOC401575 (LOC401575), mRNA
 XM_379694 Homo sapiens hypothetical gene supported by AK125149 (LOC401577), mR
 XM_379695 Homo sapiens hypothetical gene supported by BC056508; NM_004679 (LOC
 XM_379696 Homo sapiens hypothetical gene supported by AK057918 (LOC401579), mR
 XM_379697 Homo saplens hypothetical gene supported by AL832542 (LOC40 1582), mR
 XM 379699 Homo sapiens LOC401583 (LOC401583), mRNA
 XM_379700 Homo saplens hypothetical protein LOC286442 (LOC286442), mRNA
 XM_379702 Homo sapiens hypothetical gene supported by AK098783 (LOC401585), mR
 XM 379703 Homo sapiens hypothetical gene supported by AK130892 (LOC401587), mR
 XM 379704 Homo sapiens hypothetical gene supported by AK056314; BC034616 (LOC4
 XM_379705 Homo sapiens hypothetical protein LOC158572 (LOC158572), mRNA
XM_379714 Homo sapiens LOC401596 (LOC401596), mRNA
XM_379715 Homo saplens hypothetical gene supported by AK125301 (LOC401597), mR
XM_379716 Homo sapiens hypothetical gene supported by AK057746 (LOC401599), mR
XM_379717 Homo saplens hypothetical gene supported by AJ421269; AL359612; NM_0
XM_379720 Homo sapiens hypothetical gene supported by BX537697 (LOC401613), mR
XM_379721 Homo sapiens hypothetical gene supported by BX640956 (LOC401615), mR
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XM_379723 Homo saplens hypothetical gene supported by AK094280 (LOC401617), mR
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XM_379735 Homo sapiens LOC401626 (LOC401626), mRNA
XM_379736 Homo saplens hypothetical gene supported by AK125149 (LOC4O1628), mR
XM_379738 Homo sapiens LOC401629 (LOC401629), mRNA
XM_379739 Homo sapiens LOC401630 (LOC401630), mRNA
XM_379741 Homo saplens LOC401701 (LOC401701), mRNA
XM_379749 Homo sapiens LOC401880 (LOC401880), mRNA
XM 379760 Homo sapiens LOC402387 (LOC402387), mRNA
XM 379761 Homo sapiens LOC402433 (LOC402433), mRNA
XM 379766 Homo sapiens unc-84 homolog A (C. elegans) (UNC84A), mRNA
XM_379767 Homo saplens DKFZP586J0619 protein (DKFZP586J0619), mRNA
XM_379771 Homo sapiens KIAA0415 gene product (KIAA0415), mRNA
XM_379772 Homo sapiens hypothetical gene supported by BC031661 (LOC402450), mR
XM_379773 Homo saplens hypothetical protein LOC285924 (LOC285924), mRNA
XM_379774 Homo sapiens KIAA1856 protein (KIAA1856), mRNA
XM_379775 Homo sapiens hypothetical gene supported by AK125308 (LOC402452), mR
XM_379776 Homo sapiens hypothetical gene supported by AK123535 (LOC4O2454), mR
XM_379777 Homo saplens similar to Oncomodulin (OM) (Parvalbumin beta) (LOC402456
XM 379780 Homo sapiens similar to unc-93 homolog B1; unc93 (C.elegans) homolog B;
XM_379781 Homo sapiens similar to beta-1,4-mannosyltransferase; beta-1,4 mannosyltra
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XM 379784 Homo sapiens glucocorticoid induced transcript 1 (GLCCI1), mRNA
XM 379786 Homo sapiens similar to Chaln , Heat-Shock Cognate 70kd Protein (44kd Atr
XM_379787 Homo sapiens similar to heat shock 70kDa protein 8 Isoform 2; heat shock co
XM_379788 Homo sapiens PHD finger protein 14 (PHF14), mRNA
XM_379792 Homo sapiens similar to TWIST neighbor (LOC402464), mRNA
XM_379793 Homo sapiens ribosomal protein L21 (RPL21), mRNA
XM_379794 Homo sapiens similar to ribosomal protein L23 (LOC402465), mRNA
XM_379796 Homo sapiens similar to Dual specificity protein kinase CLK2 (CDC like kinase
XM 379797 Homo sapiens similar to FKSG54 (LOC402469), mRNA
XM_379798 Homo sapiens KIAA0087 gene product (KIAA0087), mRNA
XM_379800 Homo sapiens KIAA0644 gene product (KIAA0644), mRNA
XM 379801 Homo sapiens KIAA0241 protein (KIAA0241), mRNA
XM_379802 Homo sapiens LOC89231 (LOC89231), mRNA
XM_379803 Homo sapiens similar to KIAA0877 protein (LOC402477), mRNA
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XM 379806 Homo sapiens similar to RP9 protein (LOC402478), mRNA XM\_379807 Homo sapiens similar to RIKEN cDNA 9330128H10 gene (LOC402479), mR XM\_379809 Homo sapiens hypothetical gene supported by AF447883 (LOC402481), mR XM\_379812 Homo sapiens similar to TRGV9 (LOC402482), mRNA XM 379815 Homo sapiens similar to sequence-specific single-stranded-DNA-binding pro XM 379816 Homo sapiens similar to t-complex 1; T-complex locus TCP-1; t-complex 1 (a XM 379817 Homo sapiens similar to RAS p21 protein activator 4; GTPase activating prot XM\_379818 Homo sapiens similar to RAS p21 protein activator 4; GTPase activating prot XM\_379819 Homo sapiens similar to DNA directed RNA polymerase II polypeptide J-relat XM\_379820 Homo sapiens similar to Ras GTPase-activating protein 4 (RasGAP-activatin XM\_379824 Homo sapiens similar to cell division cycle 10 homolog (LOC402491), mRNA XM\_379825 Homo sapiens similar to hypothetical protein FLJ25976 (LOC402492), mRN/ XM\_379827 Homo saplens hypothetical gene supported by AK126096 (LOC402494), mR XM\_379830 Homo sapiens similar to KIAA0207 (LOC402495), mRNA XM\_379831 Homo sapiens hypothetical gene supported by AK097404; NM\_198284 (LOC XM\_379832 Homo sapiens hypothetical gene supported by AK127870 (LOC402497), mR XM 379834 Homo sapiens similar to SMT3 suppressor of mif two 3 homolog 2 (LOC4025 XM 379835 Homo sapiens similar to hypothetical protein DKFZp434F142 (LOC402501), XM 379836 Homo sapiens similar to septin 10 isoform 1 (LOC402502), mRNA XM\_379838 Homo sapiens similar to bA145E8.1 (KIAA1074) (LOC402505), mRNA XM\_379839 Homo sapiens similar to CAGL79 (LOC402508), mRNA XM\_379840 Homo saplens similar to solute carrier family 29 (nucleoside transporters), m XM\_379841 Homo sapiens zinc finger protein 479 (ZNF479), mRNA XM\_379842 Homo sapiens LOC402513 (LOC402513), mRNA XM\_379843 Homo sapiens hypothetical gene supported by BC040831 (LOC402514), mR XM\_379844 Homo sapiens hypothetical gene supported by BC040831 (LOC402517), mR XM\_379845 Homo sapiens similar to solute carrier family 29 (nucleoside transporters), me XM 379846 Homo saplens similar to BC060615 protein (LOC402519), mRNA XM 379847 Homo sapiens similar to CAGL79 (LOC402520), mRNA XM 379848 Homo sapiens similar to hypothetical protein LOC285908 (LOC402521), mRI XM\_379849 Homo sapiens similar to GA binding protein transcription factor, alpha subun XM\_379850 Homo sapiens similar to hypothetical ZNF-like protein (LOC402524), mRNA XM\_379851 Homo sapiens similar to RPL6 protein (LOC402525), mRNA XM\_379852 Homo sapiens similar to envelope protein (LOC402526), mRNA XM\_379853 Homo saplens similar to myelin protein zero-like 1; protein zero related (LOC XM\_379854 Homo sapiens similar to hypothetical protein FLJ25037 (LOC402529), mRN/ XM\_379855 Homo sapiens similar to hypothetical protein MGC16733 similar to CG12113 XM 379856 Homo sapiens similar to MGC16733 protein (LOC402531), mRNA XM 379857 Homo sapiens similar to 60S ribosomal protein L35 (LOC402536), mRNA XM\_379858 Homo sapiens similar to Williams-Beuren syndrome critical region protein 19 XM\_379859 Homo sapiens similar to hypothetical protein FLJ10900 (LOC402540), mRN/ XM\_379860 Homo sapiens similar to Williams Beuren syndrome chromosome region 19 ( XM 379861 Homo sapiens similar to FKBP6 protein (LOC402543), mRNA XM\_379862 Homo saplens similar to Brutons tyrosine kinase-associated protein-135; BAI XM\_379863 Homo sapiens similar to Neutrophil cytosol factor 1 (NCF-1) (Neutrophil NAD XM\_379864 Homo sapiens similar to transcription factor GTF2IRD2 (LOC402546), mRNA XM\_379865 Homo sapiens similar to Nuclear envelope pore membrane protein POM 121 XM\_379866 Homo sapiens Williams Beuren syndrome chromosome region 24 (WBSCR2 XM\_379868 Homo sapiens similar to Neutrophil cytosolic factor 1 (LOC402549), mRNA XM\_379869 Homo sapiens similar to transcription factor GTF2IRD2 (LOC402550), mRNA XM\_379871 Homo sapiens similar to RCC1-like G exchanging factor-like isoform 1; RCC XM\_379872 Homo sapiens similar to PMS4 (LOC402552), mRNA XM\_379874 Homo sapiens similar to PMS4 homolog mismatch repair protein - human (Lt XM\_379875 Homo sapiens similar to FKBP6 protein (LOC402555), mRNA XM\_379876 Homo saplens tripartite motif-containing 50B (TRIM50B), mRNA XM\_379877 Homo sapiens similar to Nuclear envelope pore membrane protein POM 121

XM\_379879 Homo sapiens similar to hypothetical protein LOC285908 (LOC402558), mRI

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XM\_379881 Homo sapiens similar to hypothetical protein (LOC402559), mRNA XM\_379883 Homo sapiens similar to Piccolo protein (Aczonin) (LOC402561), mRNA XM\_379884 Homo sapiens sema domain, immunoglobulin domain (lg), short basic doma XM\_379885 Homo sapiens similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-XM\_379887 Homo saplens similar to hypothetical protein 4932412H11 (LOC402565), mF XM\_379891 Homo sapiens hypothetical gene supported by AK124274 (LOC402566), mR XM\_379892 Homo sapiens similar to Homeobox protein DLX-6 (LOC402567), mRNA XM\_379893 Homo sapiens similar to CG14980-PB (LOC375601), mRNA XM 379894 Homo sapiens similar to importin alpha 1b (LOC402569), mRNA XM 379895 Homo sapiens hypothetical protein FLJ22037 (FLJ22037), mRNA XM 379896 Homo sapiens hypothetical protein LOC285989 (LOC285989), mRNA XM\_379897 Homo sapiens similar to Zinc-alpha-2-glycoprotein precursor (Zn-alpha-2-gly XM\_379899 Homo sapiens similar to hypothetical protein MGC49416 (LOC402572), mRN XM\_379901 Homo sapiens hypothetical gene supported by BC031966 (LOC402573), mR XM\_379904 Homo sapiens similar to mucin 11 (LOC402575), mRNA XM\_379905 Homo sapiens similar to intestinal membrane mucin MUC17 (LOC402576), n XM 379906 Homo sapiens similar to PMS5 homolog mismatch repair protein - human (Lt XM\_379908 Homo sapiens similar to DNA directed RNA polymerase II polypeptide J-relai XM 379909 Homo sapiens similar to M-phase phosphoprotein 11 (LOC402580), mRNA XM\_379910 Homo sapiens similar to reverse transcriptase related protein (LOC402581), XM\_379911 Homo sapiens similar to KIAA1218 protein (LOC402584), mRNA XM 379913 Homo sapiens similar to calcium-independent phospholipase A2 (LOC40258 XM 379914 Homo sapiens hypothetical protein LOC286009 (LOC286009), mRNA XM\_379917 Homo sapiens similar to hyaluronoglucosaminidase 1 Isoform 1; hyaluronida XM\_379919 Homo sapiens similar to hypothetical protein FLJ25976 (LOC402594), mRN/ XM\_379920 Homo saplens similar to hypothetical protein LOC285908 (LOC402595), mRI XM\_379921 Homo saplens hypothetical protein LOC346653 (LOC346653), mRNA XM 379923 Homo sapiens KIAA1170 protein (KIAA1170), mRNA XM 379927 Homo saplens plexin A4 (PLXNA4), mRNA XM\_379931 Homo saplens hypothetical protein LOC155006 (LOC155006), mRNA XM\_379932 Homo saplens KIAA1549 protein (KIAA1549), mRNA XM\_379933 Homo sapiens hypothetical protein FLJ25778 (FLJ25778), mRNA XM\_379934 Homo sapiens similar to A630082K20Rlk protein (LOC402600), mRNA XM\_379935 Homo sapiens similar to RAB19, member RAS oncogene family (LOC40260) XM\_379936 Homo sapiens similar to hypothetical protein (LOC402602), mRNA XM\_379938 Homo sapiens LCHN protein (LCHN), mRNA XM\_379939 Homo sapiens similar to RIKEN cDNA 1700016G05 (LOC402604), mRNA XM\_379940 Homo saplens hypothetical protein LOC93432 (LOC93432), mRNA XM\_379954 Homo sapiens similar to KIAA0738 protein (LOC402618), mRNA XM\_379958 Homo saplens similar to hypothetical protein MGC41943 (LOC402619), mRN XM\_379959 Homo sapiens FLJ43692 protein (FLJ43692), mRNA XM 379962 Homo sapiens similar to KIAA1285 protein (LOC402620), mRNA XM 379964 Homo sapiens likely ortholog of mouse zinc finger protein EZI (EZI), mRNA XM\_379965 Homo sapiens FLJ45737 protein (FLJ45737), mRNA XM 379966 Homo sapiens similar to KIAA2036 protein (LOC402621), mRNA XM\_379967 Homo sapiens KIAA0543 protein (KIAA0543), mRNA XM\_379968 Homo sapiens chromosome 7 open reading frame 32 (C7orf32), mRNA XM\_379970 Homo sapiens similar to Zinc finger protein 84 (Zinc finger protein HPF2) (LC XM\_379974 Homo sapiens KIAA1402 protein (CSGlcA-T), mRNA XM\_379975 Homo sapiens hypothetical gene supported by AK127717 (LOC402625), mR XM\_379976 Homo sapiens similar to Fatty acid-binding protein, epidermal (E-FABP) (Psc XM\_379977 Homo sapiens similar to T-complex protein 1 (LOC402629), mRNA XM\_379979 Homo saplens hypothetical protein LOC285888 (LOC285888), mRNA XM\_379980 Homo sapiens hypothetical protein LOC155435 (LOC155435), mRNA

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XM\_379988 Homo sapiens similar to galectin-related inter-fiber protein (LOC402635), mF XM\_379989 Homo sapiens similar to olfactory receptor MOR267-3 (LOC402636), mRNA XM 379990 Homo sapiens similar to Calgizzarin (S100C protein) (MLN 70) (LOC402637) XM 379991 Homo sapiens similar to ribosomal protein L31 (LOC-402638), mRNA XM 379993 Homo sapiens similar to offactory receptor MOR145-2 (LOC402639), mRNA XM 379994 Homo sapiens similar to 4930579E17Rik protein (LOC402640), mRNA XM 379995 Homo sapiens similar to MGC76216 protein (LOC402641), mRNA XM 379996 Homo sapiens similar to solute carrier family 40 (iron-regulated transporter), XM 379997 Homo sapiens similar to tropomyosin 3 (LOC402643), mRNA XM\_379998 Homo sapiens similar to peptidylprolyl isomerase A (L\_OC402644), mRNA XM 379999 Homo sapiens similar to FLJ40113 protein (LOC402645), mRNA XM 380002 Homo sapiens similar to ELK1 (LOC402648), mRNA XM 380005 Homo sapiens similar to equilibrative nucleoside tran-sporter 4; hENT4 (LOC/ XM 380006 Homo sapiens similar to beta-glucuronidase (LOC402662), mRNA XM 380007 Homo sapiens similar to vomeronasal receptor V1RC3 (LOC402663), mRNA XM 380008 Homo sapiens similar to Opioid binding protein/cell acthesion molecule precu XM 380009 Homo sapiens similar to protein kinase related to Raff protein kinases; Metho XM\_380010 Homo saplens similar to metabotropic glutamate receptor 8; G protein-couple XM 380011 Home sapiens similar to GTF2I repeat domain cental ming 1 isoform 2; William XM 380012 Homo sapiens similar to opposite strand transcription unit to Stag3; Gats pro XM 380013 Homo saplens similar to GrpE protein homolog 1, mitochondrial precursor (N XM 380014 Homo sapiens similar to GTF2I repeat domain contai ning 1 isoform 2; William XM 380015 Homo sapiens similar to peptidylprolyl isomerase A (LOC402673), mRNA XM\_380018 Homo sapiens hypothetical protein DKFZP434A0225 (DKFZP434A0225), mf XM 380019 Homo saplens similar to RIKEN cDNA 4930511M11 (LOC402675), mRNA XM\_380020 Homo sapiens similar to Protein C6orf66 (HSPC125) (My013 protein) (LOC4) XM 380021 Homo sapiens similar to ribosomal protein S3a; 40S ribosomal protein S3a; v XM\_380022 Homo saplens similar to Ser/Thr protein kinase PAR-1Balpha (LOC402679), XM 380024 Home sapiens similar to opposite strand transcription unit to Stag3; Gats pro XM 380025 Homo sapiens similar to PMS2L13 (LOC402681), mRNA XM 380026 Homo sapiens similar to RIKEN cDNA 2700038N03 (LOC402682), mRNA XM 380028 Homo sapiens similar to 40S RIBOSOMAL PROTEIN SA (P40) (34/67 KD L/ XM 380031 Homo sapiens similar to KIAA0538 protein (LOC402684), mRNA XM 380032 Homo sapiens similar to Ras GTPase-activating protein 4 (RasGAP-activatin XM 380033 Homo sapiens similar to 60S ribosomal protein L23a (LOC402686), mRNA Homo sapiens similar to Argininosuccinate synthase (Citrulline--aspartate lig-XM 380034 XM\_380036 Homo sapiens similar to RIKEN cDNA 6332401019 gene (LOC402689), mR XM\_380038 Homo sapiens similar to Triosephosphate Isomerase (TIM) (LOC402691), ml XM\_380039 Homo sapiens similar to aldo-keto reductase family 1, member B10; aldose r XM\_380040 Homo sapiens similar to beta-tubulin (LOC402693), rnRNA XM 380042 Homo saniens similar to 60S ribosomal protein L15 (LOC402694), mRNA XM 380044 Homo sapiens similar to 60S ribosomal protein L17 ( L23) (Amino acid starva XM 380045 Homo sapiens similar to Nucleoside diphosphate kin-ase, mitochondrial prect XM 380047 Homo saplens similar to Nucleoside diphosphate kin-ase, mitochondrial precu XM 380048 Homo sapiens similar to Olfactory receptor 9A4 (LOC402698), mRNA XM 380055 Homo sapiens similar to Olfactory receptor 9A2 (LOC402707), mRNA XM 380056 Homo sapiens similar to Olfactory receptor 6V1 (LOC402708), mRNA Homo sapiens similar to Histidine triad nucleotide-birnding protein 1 (Adenosi XM 380057 XM 380059 Homo sapiens similar to Olfactory receptor 2F2 (Olfa ctory receptor 7-1) (ORi XM 380063 Homo sapiens similar to Olfactory receptor 2A12 (LOC402711), mRNA XM 380067 Homo sapiens similar to Olfactory receptor 2A1 (LOC402712), mRNA XM\_380068 Homo sapiens similar to Olfactory receptor 2A1 (LOC402713), mRNA XM\_380069 Homo sapiens similar to OG-2 homeodomain proteirs-like; similar to U65067 XM\_380070 Homo sapiens similar to Importin alpha-2 subunit (Karyopherin alpha-2 subunit XM\_380072 Homo sapiens similar to 60S ribosomal protein L32 (LOC402716), mRNA XM 380073 Homo sapiens similar to Huntingtin interacting protein K (LOC402717), mRN. XM 380074 Homo sapiens similar to BET1 homolog (Golgi vesic ular membrane traffickin

XM 380076 Homo sapiens similar to TSH receptor suppressor element-binding protein-1 XM 380077 Homo sapiens similar to ppg3 (LOC402720), mRNA XM 380078 Homo sapiens similar to S-adenosylmethionine decarboxylase 1; S-adenosyl XM 380081 Homo sapiens hypothetical protein FLJ36112 (FLJ36112), mRNA XM 380082 Homo sapiens hypothetical gene supported by AK125766 (LOC402448), mR XM\_380085 Homo sapiens hypothetical gene supported by BC032734 (LOC402449), mR XM\_380087 Homo sapiens LOC402451 (LOC402451), mRNA XM\_380088 Homo sapiens LOC402453 (LOC402453), mRNA XM\_380089 Homo sapiens hypothetical gene supported by AK127500 (LOC402463), mR XM\_380091 Homo sapiens hypothetical gene supported by BC039682 (LOC402466), mR XM\_380092 Homo sapiens hypothetical protein LOC285941 (LOC285941), mRNA XM 380093 Homo sapiens hypothetical gene supported by BC025338 (LOC402470), mR XM 380094 Homo sapiens hypothetical gene supported by AK093987 (LOC402471), mR XM 380095 Homo sapiens LOC402472 (LOC402472), mRNA XM 380096 Homo sapiens LOC402473 (LOC402473), mRNA XM\_380097 Homo sapiens hypothetical gene supported by BC023581; BC044638 (LOC4 XM\_380098 Homo sapiens hypothetical gene supported by BC016976 (LOC402475), mR XM 380099 Homo saplens hypothetical gene supported by AK092714 (LOC402476), mR XM\_380100 Homo saplens hypothetical gene supported by AL832092 (LOC402480), mR XM\_380103 Homo sapiens hypothetical gene supported by AK127273 (LOC402483), mR XM 380104 Homo sapiens LOC402485 (LOC402485), mRNA XM 380105 Homo saplens hypothetical protein LOC285958 (LOC285958), mRNA XM\_380106 Homo sapiens hypothetical gene supported by AK125311 (LOC402493), mR XM\_380107 Homo sapiens hypothetical gene supported by AK024248; AL137733; BC06; XM 380108 Homo sapiens LOC402506 (LOC402506), mRNA XM 380109 Homo saplens LOC402507 (LOC402507), mRNA XM 380110 Homo sapiens LOC402511 (LOC402511), mRNA XM 380111 Homo sapiens hypothetical gene supported by BX648489 (LOC402512), mR XM 380112 Homo sapiens LOC402515 (LOC402515), mRNA XM 380113 Homo saplens LOC402516 (LOC402516), mRNA XM\_380114 Homo sapiens LOC402523 (LOC402523), mRNA XM\_380115 Homo sapiens LOC402528 (LOC402528), mRNA XM\_380117 Homo sapiens LOC402532 (LOC402532), mRNA XM\_380118 Homo saplens hypothetical gene supported by AK024371; BC037920 (LOC4 XM\_380119 Homo sapiens hypothetical gene supported by AK054923; AK126730; NM\_0 XM\_380120 Homo sapiens LOC402537 (LOC402537), mRNA XM\_380121 Homo saplens LOC402538 (LOC402538), mRNA XM\_380122 Homo sapiens LOC402542 (LOC402542), mRNA XM\_380125 Homo sapiens LOC402553 (LOC402553), mRNA XM\_380126 Homo sapiens hypothetical gene supported by AK091784 (LOC402557), mR XM\_380127 Homo sapiens LOC402560 (LOC402560), mRNA XM\_380128 Homo sapiens LOC402563 (LOC402563), mRNA XM\_380129 Homo sapiens LOC402564 (LOC402564), mRNA XM\_380131 Homo sapiens hypothetical protein FLJ34048 (FLJ34048), mRNA XM 380133 Homo sapiens LOC402568 (LOC402568), mRNA XM 380134 Homo saplens LOC402574 (LOC402574), mRNA XM\_380135 Homo saplens LOC402578 (LOC402578), mRNA XM\_380136 Homo sapiens LOC402582 (LOC402582), mRNA XM\_380137 Homo sapiens hypothetical protein LOC340340 (LOC340340), mRNA XM 380138 Homo sapiens LOC402586 (LOC402586), mRNA XM 380139 Homo sapiens hypothetical gene supported by BX537645 (LOC402587), mR XM\_380140 Homo sapiens LOC402589 (LOC402589), mRNA XM\_380141 Homo sapiens hypothetical gene supported by BX648695 (LOC402590), mR XM\_380142 Homo saplens hypothetical gene supported by BC063892 (LOC402591), mR

XM\_380143 Homo sapiens LOC402592 (LOC402592), mRNA

XM\_380147 Homo sapiens LOC402597 (LOC402597), mRNA

XM\_380146 Homo sapiens hypothetical gene supported by AK125651; BC039420 (LOC4

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XM 380148 Homo sapiens LOC402598 (LOC402598), mRNA XM 380149 Homo sapiens LOC402599 (LOC402599), mRNA XM\_380150 Homo sapiens hypothetical gene supported by BX648692 (LOC402603), mR XM 380151 Homo sapiens LOC402617 (LOC402617), mRNA XM 380152 Homo sapiens hypothetical protein LOC90520 (LOC90520), mRNA XM 380153 Homo sapiens LOC402622 (LOC402622), mRNA XM\_380154 Homo sapiens hypothetical protein LOC285972 (LOC285972), mRNA XM 380155 Homo sapiens LOC402626 (LOC402626), mRNA XM 380156 Homo sapiens LOC402627 (LOC402627), mRNA XM 380157 Homo sapiens LOC402630 (LOC402630), mRNA XM 380158 Homo sapiens hypothetical gene supported by AY166699 (LOC402631), mR XM 380159 Homo sapiens hypothetical gene supported by AK054822 (LOC402632), mR XM 380160 Homo sapiens hypothetical protein LOC285889 (LOC285889), mRNA XM 380162 Homo sapiens hypothetical protein LOC154822 (LOC154822), mRNA XM 380170 Homo sapiens phosphodiesterase 4D interacting protein (myomegalin) (PDE XM\_380171 Homo sapiens iroquois homeobox protein 1 (IRX1), mRNA XM\_380173 Homo sapiens hypothetical protein MGC39830 (MGC39830), mRNA XM\_380174 Homo sapiens similar to aquaporin 11 (LOC285192), mRNA XM 380175 Homo sapiens hypothetical protein MGC22265 (MGC22265), mRNA XM\_380176 Homo sapiens similar to hypothetical protein D030010E02 (LOC401952), mF NC 000001 Homo sapiens chromosome 1, complete sequence NC 000002 Homo sapiens chromosome 2, complete sequence NC 000003 Homo sapiens chromosome 3, complete sequence NC 000004 Homo sapiens chromosome 4, complete sequence NC 000005 Homo saplens chromosome 5, complete sequence NC 000006 Homo sapiens chromosome 6, complete sequence NC 000007 Homo sapiens chromosome 7, complete sequence NC 000008 Homo saplens chromosome 8, complete sequence NC 000009 Homo sapiens chromosome 9, complete sequence NC 000010 Homo sapiens chromosome 10, complete sequence NC 000011 Homo sapiens chromosome 11, complete sequence NC\_000012 Homo sapiens chromosome 12, complete sequence NC 000013 Homo sapiens chromosome 13, complete sequence NC\_000014 Homo sapiens chromosome 14, complete sequence NC 000015 Homo sapiens chromosome 15, complete sequence NC 000016 Homo sapiens chromosome 16, complete sequence NC 000017 Homo sapiens chromosome 17, complete sequence NC\_000018 Homo sapiens chromosome 18, complete sequence NC\_000019 Homo sapiens chromosome 19, complete sequence NC\_000020 Homo sapiens chromosome 20, complete sequence NC\_000021 Homo sapiens chromosome 21, complete sequence NC 000022 Homo sapiens chromosome 22, complete sequence NC\_000023 Homo sapiens chromosome X, complete sequence NC 000024 Homo saplens chromosome Y, complete sequence NC 001807 Homo sapiens mitochondrion, complete genome NG 000002 Homo sapiens immunoglobulin lambda locus (IGL@) on chromosome 22 NG 000004 Homo sapiens cytochrome P450, family 3, subfamily A (CYP3A) on chromos NG 000006 Homo sapiens alpha globin region (HBA@) on chromosome 16 NG 000007 Homo saniens beta globin region (HBB@) on chromosome 11 NG 000008 Homo sapiens cytochrome P450, family 2, subfamily A (CYP2A) on chromos NG 000009 Homo sapiens small histone family cluster (HFS@) on chromosome 6 NG 000012 Homo saplens protocadherin gamma cluster (PCDHG@) on chromosome 5 NG\_000013 Homo sapiens MHC class III complement gene cluster, monomodular haplot NG 000016 Homo sapiens genomic protocadherin alpha cluster (PCDHA@) on chromosi NG\_000017 Homo sapiens protocadherin beta cluster (PCDHB@) on chromosome 5 NG 000018 Homo sapiens type I (acidic) hair keratin gene cluster (KRTHA.1@) on chron

NG\_000019 Homo sapiens chorionic gonadotropin beta region (CGB@) on chromosome

NG 000827 Homo sapiens genomic histone family microcluster (HFM@) on chromosome NG 000833 Homo saniens immunoglobulin kappa locus, distal duplicated V-cluster (IGK-Homo sapiens immunoglobulin kappa locus, proximal V-cluster and J-C clust NG 000834 NG 000837 Homo sapiens surfeit locus (SURF@) on chromosome 9 NG 000839 Homo sapiens cystatin locus (CST@) on chromosome 20 NG\_000840 Homo sapiens actin, beta pseudogene 8 (ACTBP8) on chromosome 6 NG\_000841 Homo sapiens actin, gamma pseudogene 2 (ACTGP2) on chromosome Y NG 000842 Homo sapiens actin, gamma pseudogene 3 (ACTGP3) on chromosome 20 NG 000843 Homo sapiens adenosine A2b receptor pseudogene (ADORA2BP) on chrom NG 000845 Homo sapiens argininosuccinate synthetase pseudogene 2 (ASSP2) on chro NG\_000846 Homo sapiens argininosuccinate synthetase pseudogene 4 (ASSP4) on chro Homo sapiens argininosuccinate synthetase pseudogene 5 (ASSP5) on chro NG 000847 Homo saniens amininosuccinate synthetase pseudogene 6 (ASSP6) on chro NG 000848 Homo saniens ATPase, Na+/K+ transporting, beta 3 pseudogene (ATP1B3P NG 000849 NG 000850 Homo sapiens BCL2-like 7 pseudogene 1 (BCL2L7P1) on chromosome 20 NG\_000851 Homo sapiens crystallin, beta B2 pseudogene 1 (CRYBB2P1) on chromoson NG\_000852 Homo sapiens cysteine and glycine-rich protein 2 pseudogene (CSRP2P) on NG\_000853 Homo sapiens cytochrome P450, family 2, subfamily D, polypeptide 8 pseudo NG 000854 Homo saplens cytochrome P450, family 2, subfamily D, polypeptide 8 pseudi NG\_000858 Homo sapiens dihydrofolate reductase pseudogene 1 (DHFRP1) on chromos NG\_000859 Homo sapiens eukaryotic translation initiation factor 5A pseudogene 1 (EIF5) NG\_000861 Homo sapiens glycerol kinase pseudogene 3 (GKP3) on chromosome 4 NG 000862 Homo saplens quanine nucleotide binding protein (G protein), q polypeptide | NG 000863 Homo sapiens hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyr NG 000865 Homo sapiens proliferating cell nuclear antigen pseudogene (PCNAP) on chi NG 000866 Homo sapiens RNA binding motif, single stranded interacting protein 1, pseu NG 000867 Homo sapiens radixin pseudogene 2 (RDXP2) on chromosome X NG\_000868 Homo sapiens ribosomal protein L21 pseudogene 1 (RPL21P1) on chromosomal NG\_000869 Homo sapiens ribosomal protein L32 pseudogene 1 (RPL32P1) on chromosomal NG\_000870 Homo sapiens ribonucleotide reductase M2 polypeptide pseudogene 3 (RRIV NG 000871 Homo sapiens ribonucleotide reductase M2 polypeptide pseudogene 4 (RRIV NG\_000872 Homo sapiens tRNA phosphoserine (opal suppressor) pseudogene 1 (TRSP NG 000873 Homo sapiens makorin, ring finger protein, pseudogene 1 (MKRNP1) on chro NG\_000874 Homo sapiens heterogeneous nuclear ribonucleoprotein D (AU-rich element NG\_000877 Homo sapiens ribosomal protein L3 pseudogene 1 (RPL3P1) on chromosom NG 000878 Homo sapiens ribosomal protein L23a pseudogene 3 (RPL23AP3) on chrom-NG 000880 Homo sapiens arylsulfatase E pseudogene (ARSEP) on chromosome Y NG\_000881 Homo sapiens arylsulfatase D pseudogene (ARSDP) on chromosome Y NG\_000882 Homo sapiens voltage-dependent anion channel 5, pseudogene (VDAC5P) c NG 000883 Homo sapiens high-mobility group (nonhistone chromosomal) protein 1-like 5 NG 000884 Homo sapiens snall homolog 1 like 1 (Drosophila) (SNAI1L1) pseudogene or NG\_000885 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p NG\_000886 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p: NG\_000887 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p. NG\_000889 Homo sapiens ribosomal protein L41, pseudogene 3 (RPL41P3) on chromos NG\_000890 Homo sapiens ribosomal protein L41, pseudogene 2 (RPL41P2) on chromos NG\_000891 Homo sapiens ribosomal protein L41, pseudogene 1 (RPL41P1) on chromos NG\_000892 Homo sapiens high-mobility group (nonhistone chromosomal) protein 17-like NG 000893 Homo sapiens ribosomal protein S24 pseudogene 1 (RPS24P1) on chromos NG\_000894 Homo sapiens ribosomal protein L34 pseudogene 2 (RPL34P2) on chromosomal NG 000895 Homo sapiens ribosomal protein L34 pseudogene 1 (RPL34P1) on chromosomal pseudogene 1 (RPL34P1) NG 000896 Homo sapiens ribosomal protein S5 pseudogene 1 (RPS5P1) on chromosom NG 000897 Homo sapiens high-mobility group (nonhistone chromosomal) protein 1-like \$ NG 000898 Homo sapiens zinc finger protein 299 pseudogene (ZNF299P) on chromosor NG 000899 Homo sapiens voltage-dependent anion channel 2 pseudogene (VDAC2P) o NG 000900 Homo sapiens tubulin, alpha pseudogene (TUBAP) on chromosome 21 NG 000901 Homo sapiens solute carrier family 6, member 6 pseudogene (SLC6A6P) on

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NG 000903 Homo sapiens ribosomal protein S5-like (RPS5L) pseudogene on chromosor Homo sapiens ribosomal protein S3A pseudogene 1 (RPS3AP1) on chromos NG 000904 NG 000906 Homo sapiens ribosomal protein S20, pseudogene 1 (RPS20P1) on chromos NG 000907 Homo sapiens ribosomal protein L34 pseudogene 3 (RPL34P3) on chromosomal NG\_000908 Homo sapiens ribosomal protein L31 pseudogene 1 (RPL31P1) on chromosomal NG\_000909 Homo sapiens ribosomal protein L23 pseudogene 2 (RPL23P2) on chromosomal pseudogene 2 (RPL23P2) NG\_000910 Homo sapiens ribosomal protein L23a pseudogene 4 (RPL23AP4) on chrom-NG\_000911 Homo sapiens ribosomal protein L10 pseudogene 1 (RPL10P1) on chromosomal NG\_000912 Homo sapiens ribosomal modification protein rimK-like (E. coli) pseudogene NG\_000913 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 2 pseudo NG 000914 Homo sapiens peptidylprolyl isomerase A (cyclophilin A), pseudogene (PPIA NG\_000915 Homo sapiens polymerase (RNA) II (DNA directed) polypeptide C, pseudoge NG\_000916 Homo sapiens poly(rC) binding protein 2, pseudogene 1 (PCBP2P1) on chro NG\_000917 Homo sapiens myosin, light polypeptide 6, pseudogene (MYL6P) on chromo: NG 000919 Homo sapiens inner membrane protein, mitochondrial (mitofilin) pseudogene NG 000920 Homo sapiens heat shock 60kDa protein 1 (chaperonin) pseudogene 7 (HSF NG 000921 Homo sapiens high-mobility group (nonhistone chromosomal) protein 14 pse NG\_000922 Homo sapiens H2A histone family, member Z, pseudogene (H2AFZP) on chi NG 000923 Homo sapiens famesyl diphosphate synthase pseudogene (FDPSP) on chro NG\_000924 Homo sapiens eukaryotic translation initiation factor 4A, isoform 1, pseudoge NG\_000925 Homo sapiens eukaryotic translation initiation factor 3, subunit 5 epsilon, 47k NG\_000927 Homo sapiens cytochrome P450, family 4, subfamily F, polypeptide 3-like ps NG\_000929 Homo sapiens complement component 1, q subcomponent binding protein, p NG\_000930 Homo sapiens F-box and WD-40 domain protein 11 pseudogene 1 (FBXW11 NG\_000933 Homo sapiens endoplasmic reticulum lumenal protein 28 pseudogene (ERP2 NG 000936 Homo sapiens plakophilin 2 pseudogene 1 (PKP2P1) on chromosome 12 NG 000938 Homo sapiens keratin, hair, basic, pseudogene 1 (KRTHBP1) on chromosom NG\_000939 Homo sapiens keratin associated protein 2 pseudogene 1 (KRTAP2P1) on cl NG\_000940 Homo sapiens keratin, hair, basic, pseudogene 2 (KRTHBP2) on chromosom NG\_000941 Homo sapiens keratin associated protein 3 pseudogene 1 (KRTAP3P1) on cl NG 000942 Homo sapiens keratin associated protein 9 pseudogene 1 (KRTAP9P1) on cl NG\_000943 Homo sapiens keratin, hair, basic, pseudogene 3 (KRTHBP3) on chromosom NG\_000944 Homo sapiens keratin, hair, basic, pseudogene 4 (KRTHBP4) on chromosom NG 000945 Homo sapiens ribosomal protein L12-like 3 (RPL12L3) pseudogene on chror NG 000946 Homo sapiens ribosomal protein S2-like 1 (RPS2L1) pseudogene on chromo NG 000948 Homo sapiens 5'-nucleotidase, cytosolic III pseudogene 1 (NT5C3P1) on chr NG 000949 Homo sapiens pleckstrin homology domain containing, family A member 3 ps NG 000950 Homo sapiens ribosomal protein S4-like 2 (RPS4L2) pseudogene on chromo NG 000951 Homo sapiens ribosomal protein S15a pseudogene 1 (RPS15AP1) on chrom NG\_000952 Homo sapiens ribosomal protein S10-like (RPS10L) pseudogene on chromor NG\_000953 Homo sapiens ribosomal protein S23 pseudogene 1 (RPS23P1) on chromos NG\_000954 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12 NG 000955 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12 NG 000956 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12 NG 000957 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12 NG 000958 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12 NG 000959 Homo sapiens similar to DNAJ (HEJ1) pseudogene on chromosome 1 NG\_000960 Homo sapiens ribosomal protein S27a pseudogene 1 (RPS27AP1) on chrom NG 000961 Homo sapiens RNA, U73B small nucleolar (U73B) pseudogene on chromosc NG 000962 Homo sapiens ribosomal protein L12 pseudogene 4 (RPL12P4) on chromosomal NG 000963 Homo sapiens ribosomal protein L38 pseudogene 1 (RPL38P1) on chromoso NG\_000964 Homo sapiens ribosomal protein L12-like 2 (RPL12L2) pseudogene on chror NG 000965 Homo sapiens ribosomal protein L27a pseudogene (RPL27AP) on chromoso NG 000966 Homo sapiens ribosomal protein L13 pseudogene 2 (RPL13P2) on chromosomal NG 000967 Homo sapiens ribosomal protein S4-like (RPS4L) pseudogene on chromosom NG 000968 Homo sapiens mitochondrial ribosomal protein S16 pseudogene (MRPS16P) NG 000969 Homo sapiens ribosomal protein L7a like 2 (RPL7AL2) pseudogene on chror

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NG\_000970 Homo sapiens ribosomal protein S18 pseudogene 1 (RPS18P1) on chromos Homo sapiens ribosomal protein L23a pseudogene 6 (RPL23AP6) on chrom-NG 000971 Homo sapiens ribosomal protein S11, pseudogene 1 (RPS11P1) on chromos NG 000972 Homo sapiens ribosomal protein, large, P0 pseudogene 1 (RPLP0P1) on chr NG 000973 NG 000974 Homo sapiens ribosomal protein L7a-like 3 (RPL7AL3) pseudogene on chror NG 000975 Homo sapiens ribosomal protein L15 pseudogene 1 (RPL15P1) on chromoso Homo sapiens mitochondrial ribosomal protein S11 pseudogene 1 (MRPS11 NG 000977 NG 000978 Homo sapiens ribosomal protein L12 pseudogene 3 (RPL12P3) on chromoso Homo sapiens high-mobility group (nonhistone chromosomal) protein 4-like 2 NG 000979 NG 000980 Homo sapiens ribosomal protein L21 pseudogene 4 (RPL21P4) on chromoso Homo sapiens ribosomal protein L7 pseudogene 2 (RPL7P2) on chromosom NG 000981 NG 000982 Homo sapiens ribosomal protein L37 pseudogene 1 (RPL37P1) on chromoso NG 000983 Homo sapiens ribosomal protein L36 pseudogene 1 (RPL36P1) on chromosomal Homo sapiens ribosomal protein S3A pseudogene 3 (RPS3AP3) on chromos NG 000984 Homo sapiens ribosomal protein L21 pseudogene 2 (RPL21P2) on chromoso NG 000986 Homo sapiens ribosomal protein L35a pseudogene (RPL35AP) on chromosc NG 000987 Homo sapiens ribosomal protein L37a pseudogene 1 (RPL37AP1) on chrom-NG 000988 Homo saplens ribosomal protein L31 pseudogene 3 (RPL31P3) on chromosomal NG 000989 Homo sapiens ribosomal protein L39 pseudogene (RPL39P) on chromosoma NG 000990 Homo sapiens ribosomal protein L17 pseudogene 1 (RPL17P1) on chromoso NG 000991 NG 000994 Homo sapiens ribosomal protein L36 pseudogene 2 (RPL36P2) on chromosomal pseudogene 2 (RPL36P2) on chromosom NG 000995 Homo sapiens ribosomal protein S27a pseudogene 2 (RPS27AP2) on chrorr NG\_000996 Homo sapiens ribosomal protein L31 pseudogene 2 (RPL31P2) on chromosomal NG 000997 Homo saplens ribosomal protein S3 pseudogene 1 (RPS3P1) on chromosom NG\_000999 Homo sapiens ribosomal protein L7A-like 4 (RPL7AL4) pseudogene on chroi NG\_001000 Homo sapiens ribosomal protein L24 pseudogene 1 (RPL24P1) on chromosomal Homo sapiens ribosomal protein S10 pseudogene 2 (RPS10P2) on chromos NG 001001 NG\_001002 Homo sapiens ribosomal protein L19 pseudogene 1 (RPL19P1) on chromosomal NG\_001004 Homo sapiens ribosomal protein S3 pseudogene 2 (RPS3P2) on chromosom NG 001005 Homo sapiens ribosomal protein L7 pseudogene 3 (RPL7P3) on chromosom NG 001006 Homo sapiens heat shock 10kDa protein 1 (chaperonin 10) pseudogene 1 (F NG 001007 Homo sapiens cytochrome c oxidase II-like (MTCO2L) pseudogene on chron NG\_001008 Homo sapiens peptidylprolyl Isomerase A (cyclophilin A)-like 2 (PPIAL2) psei NG\_001009 Homo sapiens estrogen-related receptor alpha pseudogene (ESRRAP) on cf NG 001010 Homo sapiens similar to RP42 homolog (LOC153893) pseudogene on chrom NG 001012 Homo saplens TAF2G-like gene (TAF2GL) pseudogene on chromosome 19 NG 001013 Homo sapiens glutaredoxin (thiottransferase) pseudogene (GLRXP) on chror Homo sapiens peptidylprolyl isomerase A (cyclophilin A) pseudogene 3 (PPI) NG 001014 NG 001016 Homo sapiens C-reactive protein pseudogene (LOC171422) on chromosome Homo sapiens FUSIP1 pseudogene (pFUSIP1) on chromosome 20 NG 001017 Homo sapiens immunoglobulin heavy locus (IGH.1@) on chromosome 14 NG 001019 Homo sapiens cystatin pseudogene 1 (CSTP1) on chromosome 20 NG 001020 Homo sapiens cytochrome b-5 pseudogene 4 (CYB5P4) on chromosome 20 NG 001021 Homo sapiens RNA binding motif protein, X-linked pseudogene 1 (RBMXP1) NG 001022 Homo sapiens eukaryotic translation initiation factor 3, subunit 6 48kDa pseu NG 001023 NG\_001024 Homo sapiens keratin 18 pseudogene 1 (KRT18P1) on chromosome 6 NG\_001025 Homo sapiens peptidylprolyl isomerase (cyclophilin) pseudogene 9 (PPIP9) ( NG\_001026 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 2 pseudo NG 001027 Homo sapiens ribosomal protein L23a pseudogene 1 (RPL23AP1) on chrom-Homo sapiens eukaryotic translation termination factor 1 pseudogene 1 (ETF NG 001028 Homo sapiens makorin, ring finger protein, pseudogene 3 (MKRNP3) on chro NG 001029 NG\_001030 Homo sapiens nuclear fragile X mental retardation protein interacting protein Homo sapiens ADP-ribosylation factor 4 pseudogene 2 (ARF4P2) on chromo NG 001031 NG\_001032 Homo sapiens cell division cycle 42 pseudogene 1 (CDC42P1) on chromoso Homo sapiens cytochrome c oxidase subunit VIc pseudogene 2 (COX6CP2) NG 001033 NG 001035 Homo sapiens endosulfine alpha pseudogene (ENSAP) on chromosome 20 NG 001036 Homo sapiens FAT tumor suppressor homolog 1 (Drosophila) pseudogene 1 WC05044981 [ille:///E:/WC05044981.gpc]

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NG\_001037 Homo sapiens ferritin, light polypeptide pseudogene (FTLP) on chromosome Homo sapiens glyceraldehyde-3-phosphate dehydrogenase pseudogene 2 (I NG\_001038 NG 001040 Homo sapiens glutathione S-transferase M3 pseudogene (GSTM3P) on chro NG 001041 Homo sapiens heterogeneous nuclear ribonucleoprotein A1 pseudogene 3 (i NG 001043 Homo sapiens keratin 18 pseudogene 3 (KRT18P3) on chromosome 20 NG 001045 Homo sapiens laminin receptor 1 pseudogene 1 (LAMR1P1) on chromosome NG\_001046 Homo sapiens proliferation-associated 2G4 pseudogene 2 (PA2G4P2) on ch NG\_001047 Homo sapiens phosphoglycerate mutase 3, pseudogene (PGAM3P) on chrol NG\_001048 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) pseudogene 2 (PPI) NG\_001049 Homo sapiens peptidylprolyl isomerase (cyclophilin) pseudogene 11 (PPIP1 NG\_001050 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, NG\_001051 Homo sapiens prothymosin, alpha pseudogene 6 (PTMAP6) on chromosome NG\_001052 Homo sapiens ring finger protein 11B, pseudogene (RNF11B) on chromoson NG\_001053 Homo sapiens small inducible cytokine subfamily E, member 1 (endothelial n NG\_001054 Homo sapiens splicing factor 3a, subunit 3 pseudogene (SF3A3P) on chromi NG\_001055 Homo sapiens synaptosomal-associated protein, 23kDa pseudogene (SNAP NG 001056 Homo sapiens small nuclear ribonucleoprotein polypeptide F pseudogene 1 r NG 001057 Homo saplens spermidine synthase pseudogene 1 (SRMP1) on chromosomi NG 001058 Homo sapiens suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 in NG\_001060 Homo sapiens tropomyosin 5, pseudogene (TPM5P) on chromosome 20 NG\_001061 Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 pseudogene 1 (UB NG\_001062 Homo saplens exportin, tRNA (nuclear export receptor for tRNAs) pseudoger NG\_001063 Homo saplens lysophospholipase I-like (LOC157713) pseudogene on chrom NG\_001064 Homo sapiens similar to orphan seven transmembrane receptor (RH\_II/GuB) NG\_001065 Homo sapiens RH-II/GuB pseudogene 1 (RH-II/GuBp1) on chromosome 2 NG\_001066 Homo saplens toll-like receptor 7-like (TLR7-like) pseudogene on chromosor NG\_001067 Homo sapiens alpha-2-macroglobulin pseudogene (A2MP) on chromosome NG\_001068 Homo sapiens actin, gamma pseudogene 1 (ACTGP1) on chromosome 3 NG 001069 Homo sapiens actin, gamma pseudogene 9 (ACTGP9) on chromosome 6 NG\_001070 Homo saplens adenylate kinase 3 pseudogene 1 (AK3P1) on chromosome 1 NG 001071 Homo sapiens aldehyde reductase (aldose reductase) pseudogene (ALDRP) NG\_001073 Homo sapiens S-adenosylmethionine decarboxylase pseudogene 1 (AMDP1 NG\_001074 Homo sapiens v-raf murine sarcoma 3611 viral oncogene homolog pseudoge NG\_001075 Homo saplens ADP-ribosylation factor 4 pseudogene (ARF4P) on chromosor NG\_001076 Homo sapiens ADP-ribosyltransferase 2 pseudogene (RT6 antigen homolog, NG\_001077 Homo sapiens argininosuccinate synthetase pseudogene 1 (ASSP1) on chro NG\_001078 Homo sapiens argininosuccinate synthetase pseudogene 3 (ASSP3) on chro NG 001080 Homo saplens activating transcription factor 4 pseudogene (tax-responsive e NG\_001081 Homo sapiens ATPase, Na+/K+ transporting, beta polypeptide-like 1 (ATP1E NG\_001082 Homo sapiens antiquitin-like 1 (ATQL1) pseudogene on chromosome 5 NG\_001083 Homo sapiens antiquitin-like 3 (ATQL3) pseudogene on chromosome 7 NG\_001084 Homo sapiens antiquitin-like 4 (ATQL4) pseudogene on chromosome 10 NG\_001085 Homo sapiens brain cytoplasmic RNA 1, pseudogene 2 (BCYRN1P2) on chr NG\_001086 Homo sapiens basic transcription factor 3, pseudogene 1 (BTF3P1) on chror NG\_001087 Homo saplens solute carrier family 25 (carnitine/acylcarnitine translocase), rr NG\_001088 Homo sapiens calcitonin pseudogene (CALCP) on chromosome 11 NG\_001089 Homo sapiens calmodulin 1 (phosphorylase kinase, delta) pseudogene 1 (C/ NG\_001090 Homo sapiens calmodulin 1 (phosphorylase kinase, delta) pseudogene 2 (C/ NG\_001091 Homo sapiens calmodulin 2 pseudogene 2 (CALM2P2) on chromosome 10 NG 001092 Homo sapiens cyclin D2 pseudogene (CCND2P) on chromosome 11 NG 001093 Homo sapiens cyclin D3 pseudogene (CCND3P) on chromosome 6 NG 001094 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG 001095 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG 001096 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG 001097 NG\_001098 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG\_001099 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse

NG 001100 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG\_001101 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG 001102 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG\_001103 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG\_001104 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule pse NG 001105 Homo sapiens cytochrome c oxidase subunit VIa polypeptide 1 pseudogene NG\_001106 Homo sapiens ceruloplasmin (ferroxidase) pseudogene (CPP) on chromosor NG\_001107 Homo sapiens crystallin, gamma F pseudogene 1 (CRYGFP1) on chromosor NG\_001108 Homo sapiens crystallin, gamma G pseudogene 1 (CRYGGP1) on chromoso NG\_001109 Homo sapiens crystallin, zeta (quinone reductase) pseudogene 1 (CRYZP1) NG 001110 Homo sapiens catenin (cadherin-associated protein), alpha pseudogene 1 (C NG\_001112 Homo sapiens diazepam binding inhibitor-like 2 (pseudogene) (DBIL2) on ch NG\_001113 Homo sapiens dihydrofolate reductase pseudogene 2 (DHFRP2) on chromos NG\_001114 Homo sapiens ELK2, member of ETS oncogene family, pseudogene 1 (ELK2 NG 001115 Homo sapiens enolase 1, (alpha) pseudogene (ENO1P) on chromosome 1 NG 001116 Homo sapiens ferredoxin pseudogene 2 (FDXP2) on chromosome 21 NG\_001117 Homo sapiens ferredoxin pseudogene 1 (FDXP1) on chromosome 20 NG 001118 Homo sapiens ferrochelatase pseudogene (FECHP) on chromosome 3 NG 001119 Homo sapiens forkhead box O3B (FOXO3B) pseudogene on chromosome 1 NG 001120 Homo saplens forkhead box O1B (FOXO1B) pseudogene on chromosome 5 Homo sapiens ferritin, heavy polypeptide pseudogene 2 (FTHP2) on chromo: NG 001121 NG\_001122 Homo sapiens fucosidase, alpha-L- 1, tissue pseudogene (FUCA1P) on chro NG 001123 Homo sapiens glyceraldehyde-3-phosphate dehydrogenase pseudogene 1 (t NG\_001124 Homo sapiens GDP dissociation Inhibitor 2 pseudogene (GDI2P) on chromot NG\_001125 Homo sapiens glycoprotein, alpha-galactosyltransferase 1 (GGTA1) pseudos NG\_001126 Homo sapiens glycerol kinase pseudogene 1 (GKP1) on chromosome 1 NG\_001127 Homo saplens glycerol kinase pseudogene 6 (GKP6) on chromosome X NG\_001128 Homo sapiens glutamate dehydrogenase pseudogene 2 (GLUDP2) on chron NG\_001129 Homo sapiens glutamate dehydrogenase pseudogene 5 (GLUDP5) on chron NG\_001130 Homo sapiens GM2 ganglioside activator pseudogene (GM2AP) on chromos NG 001131 Homo saplens G protein-coupled receptor 32, pseudogene (GPR32P) on chi NG\_001132 Homo saplens G protein-coupled receptor 33, pseudogene (GPR33) on chro NG 001133 Homo sapiens G protein-coupled receptor kinase 6 pseudogene (GRK6PS) of NG 001134 Homo sapiens glutathione peroxidase pseudogene 2 (GPXP2) on chromosor NG\_001135 Homo sapiens glutathione S-transferase A pseudogene 1 (GSTAP1) on chro NG\_001136 Homo sapiens gulonolactone (L-) oxidase pseudogene (GULOP) on chromos NG\_001141 Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 pse NG\_001142 Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 pse NG\_001144 Homo saplens heat shock 70kDa protein pseudogene 1 (HSPAP1) on chrom NG 001145 Homo sapiens heat shock 60kDa protein 1 (chaperonin) pseudogene 1 (HSF NG 001146 Homo sapiens heat shock 60kDa protein 1 (chaperonin) pseudogene 2 (HSF NG 001147 Homo sapiens heat shock 60kDa protein 1 (chaperonin) pseudogene 3 (HSF NG 001148 Homo saplens heat shock 60kDa protein 1 (chaperonin) pseudogene 4 (HSF NG 001149 Homo sapiens iduronate 2-sulfatase pseudogene 1 (IDSP1) on chromosome NG\_001150 Homo sapiens interferon, omega 15 (pseudogene) (IFNWP15) on chromosor NG\_001151 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NG\_001152 Homo sapiens IMP (inosine monophosphate) dehydrogenase-like 1 (IMPDHI NG\_001153 Homo sapiens Kallmann syndrome sequence pseudogene (KALP) on chrom NG\_001155 Homo sapiens lactate dehydrogenase B pseudogene (LDHBP) on chromoso NG\_001156 Homo sapiens melanoma antigen, family A, 7, pseudogene (MAGEA7) on ch NG\_001157 Homo sapiens MRE11 meiotic recombination 11 homolog B (S. cerevisiae) (I NG 001158 Homo sapiens metallothionein 2 pseudogene 1 (processed) (MT2P1) on chro NG 001159 Homo sapiens methylenetetrahydrofolate dehydrogenase (NADP+ depender NG 001160 Homo sapiens metaxin 1 pseudogene (MTX1P) on chromosome 1 NG 001161 Homo sapiens NADH dehydrogenase (ubiquinone) flavoprotein 2 pseudoger NG 001162 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p

NG\_001163 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p

Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) pa NG 001164 NG 001165 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p: Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p: NG 001166 NG 001167 Homo saniens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p. NG 001169 Homo sapiens ornithine aminotransferase-like 3 (pseudogene) (OATL3) on c NG\_001170 Homo sapiens phosphoglycerate kinase 1, pseudogene 1 (PGK1P1) on chro NG 001171 Homo sapiens prohibitin pseudogene 1 (PHBP1) on chromosome 6 NG\_001172 Homo saplens phosphorylase kinase, beta pseudogene 1 (PHKBP1) on chro NG 001173 Homo sapiens phosphorylase kinase, beta pseudogene 2 (PHKBP2) on chro NG\_001174 Homo sapiens phosphatidylinositol glycan, class A, pseudogene 1 (PIGAP1) NG\_001175 Homo sapiens phosphatidylinositol glycan, class C, pseudogene 1 (PIGCP1) NG\_001176 Homo sapiens phosphatidylinositol glycan, class F, pseudogene 1 (PIGFP1) NG 001177 Homo sapiens peptidylprolyl isomerase (cyclophilin) pseudogene 1 (PPIP1) c NG 001178 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 8 pseudo NG\_001179 Homo sapiens protein S pseudogene (beta) (PROSP) on chromosome 3 NG 001180 Homo sapiens prothymosin, alpha pseudogene 3 (gene sequence 34) (PTM/ NG\_001181 Homo sapiens prothymosin, alpha pseudogene 4 (gene sequence 112) (PTM NG 001182 Homo saplens protein tyrosine phosphatase type IVA pseudogene 2 (PTP4A NG 001183 Homo sapiens RNA, U1 small nuclear pseudogene 1 (RNU1P1) on chromos NG 001184 Homo sapiens RNA, U1 small nuclear pseudogene 2 (RNU1P2) on chromos NG 001185 Homo sapiens RNA, U3 small nucleolar pseudogene 1 (RNU3P1) NG 001186 Homo saplens RNA, U4 small nuclear pseudogene 1 (U4/7) (RNU4P1) on ch NG\_001187 Homo sapiens RNA, U4 small nuclear pseudogene 2 (U4/14) (RNU4P2) on c NG 001188 Homo sapiens RNA, U7 small nuclear pseudogene 1 (RNU7P1) on chromos-NG\_001189 Homo sapiens RNA, U7 small nuclear pseudogene 2 (RNU7P2) on chromos NG\_001190 Homo sapiens RNA, U7 small nuclear pseudogene 3 (RNU7P3) on chromosi NG 001191 Homo sapiens RNA, U7 small nuclear pseudogene 4 (RNU7P4) on chromosi NG 001192 Homo sapiens ribosomal protein L9 pseudogene 1 (RPL9P1) on chromosom NG 001193 Homo sapiens ribosomal protein L7 pseudogene (RPL7P) on chromosome 5 NG 001194 Homo sapiens sterol-C4-methyl oxidase pseudogene (SC4MOP) on chromos NG 001195 Homo sapiens SHC (Src homology 2 domain containing) transforming protein NG 001196 Homo sapiens steroid-5-alpha-reductase, alpha polypeptide pseudogene 1 (; NG 001197 Homo sapiens steroid sulfatase (microsomal) pseudogene (STSP) on chrom-NG 001198 Homo sapiens eukaryotic translation termination factor 1 pseudogene 2 (ETF NG\_001199 Homo sapiens TAR (HIV) RNA binding protein 2 pseudogene (TARBP2P) on NG 001200 Homo sapiens transcription elongation factor A (SII), 1 pseudogene (TCEA1I NG 001201 Homo sapiens thioredoxin-dependent peroxide reductase 2 (thiol-specific and NG 001202 Homo sapiens transcription factor Dp-1 pseudogene (TFDP1P) on chromoso NG\_001204 Homo sapiens tRNA leucine (AAG) pseudogene 1 (TRLP1) on chromosome NG 001205 Homo sapiens tRNA methionine elongator pseudogene 1 (TRMEP1) on chro NG 001206 Homo sapiens tubulin, beta polypeptide pseudogene 1 (TUBBP1) on chromo NG 001207 Homo sapiens ubiquitin A-52 residue ribosomal protein fusion product 1 pseu NG 001208 Homo sapiens ubiquitin A-52 residue ribosomal protein fusion product 1 pseu NG 001209 Homo sapiens ubiquitin-conjugating enzyme E2L 4 (UBE2L4) pseudogene o NG\_001210 Homo sapiens ubiquitin protein ligase E3A pseudogene 2 (UBE3AP2) on chr NG\_001211 Homo sapiens urate oxidase (UOX) pseudogene on chromosome 1 NG\_001212 Homo sapiens von Willebrand factor pseudogene (VWFP) on chromosome 2 NG\_001213 Homo sapiens v-yes-1 Yamaguchi sarcoma viral oncogene homolog pseudo NG 001214 Homo sapiens zinc finger protein 75b (ZNF75B) pseudogene on chromosom NG 001215 Homo sapiens interferon-induced protein with tetratricopeptide repeats 1, pse NG\_001216 Homo sapiens a disintegrin and metalloproteinase domain 1 (fertilin alpha) p NG\_001217 Homo sapiens G protein-coupled receptor 53, pseudogene (GPR53P) on chi NG\_001218 Homo sapiens synaptogyrin 2 pseudogene (SYNGR2P) on chromosome 15 NG 001219 Homo sapiens cytochrome c oxidase subunit VIc pseudogene 1 (COX6CP1) NG 001220 Homo sapiens cytochrome c oxidase subunit Va pseudogene 1 (COX5AP1) i NG 001221 Homo sapiens cytochrome c oxidase subunit VIIc pseudogene 1 (COX7CP1) NG 001222 Homo sapiens v-myc myelocytomatosis viral oncogene homolog 3 pseudoge

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NG 001223 Homo sapiens voltage-dependent anion channel 1-like pseudogene (VDAC1 NG 001224 Homo sapiens voltage-dependent anion channel 1 pseudogene (VDAC1P) o NG 001226 Homo sapiens H2B histone family, member O (H2BFO) pseudogene NG 001228 Homo sapiens cold shock domain protein A pseudogene 1 (CSDAP1) on chr NG 001229 Homo sapiens nuclear distribution gene C homolog (A. nidulans) pseudogen NG 001230 Homo sapiens nuclear distribution gene C homolog (A. nidulans) pseudogen NG\_001231 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p NG 001232 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p NG 001233 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p NG 001234 Homo sapiens macrophage stimulating, pseudogene 8 (MSTP8) on chromos NG 001235 Homo sapiens macrophage stimulating, pseudogene 7 (MSTP7) on chromos NG 001236 Homo sapiens macrophage stimulating, pseudogene 6 (MSTP6) on chromos NG 001237 Homo sapiens macrophage stimulating, pseudogene 5 (MSTP5) on chromos NG 001238 Homo sapiens macrophage stimulating, pseudogene 4 (MSTP4) on chromos NG 001239 Homo sapiens macrophage stimulating, pseudogene 3 (MSTP3) on chromos NG\_001240 Homo sapiens macrophage stimulating, pseudogene 2 (MSTP2) on chromos NG\_001241 Homo sapiens macrophage stimulating, pseudogene 1 (MSTP1) on chromos NG\_001242 Homo sapiens teratocarcinoma-derived growth factor 5, pseudogene (TDGFI NG\_001243 Homo sapiens teratocarcinoma-derived growth factor 4, pseudogene (TDGF NG 001244 Homo sapiens teratocarcinoma-derived growth factor 2, pseudogene (TDGF; NG 001245 Home saplens glycosylphosphatidylinositel anchor attachment 1 pseudogene NG\_001246 Homo sapiens ATP-binding cassette, sub-family D (ALD), member 1, pseudo NG 001247 Homo sapiens protocadherin alpha 14 pseudogene (PCDHA14) on chromos NG 001248 Homo sapiens RNA, U6 small nuclear pseudogene 1 (RNU6P1) on chromos NG 001249 Homo sapiens RNA, U4 small nuclear pseudogene 6 (RNU4P6) on chromos NG 001250 Homo sapiens RNA, U4 small nuclear pseudogene 5 (RNU4P5) on chromos NG\_001251 Homo sapiens RNA, U4 small nuclear pseudogene 4 (RNU4P4) on chromos NG 001252 Home sapiens RNA, U4 small nuclear pseudogene 3 (RNU4P3) on chromos NG 001253 Homo sapiens RNA, U3 small nucleolar pseudogene 4 (RNU3P4) on chromo NG\_001254 Homo sapiens RNA, U3 small nucleolar pseudogene 3 (RNU3P3) on chromc NG\_001255 Homo sapiens RNA, U3 small nucleolar pseudogene 2 (RNU3P2) on chromc NG 001256 Homo sapiens RNA, U2 small nuclear pseudogene 3 (RNU2P3) on chromos NG 001257 Homo sapiens RNA, U2 small nuclear pseudogene 2 (RNU2P2) on chromos NG 001258 Homo sapiens RNA, U2 small nuclear pseudogene 1 (RNU2P1) NG\_001259 Homo sapiens RNA, U1 small nuclear pseudogene 10 (RNU1P10) on chrom NG 001260 Homo sapiens RNA, U1 small nuclear pseudogene 9 (RNU1P9) on chromos NG 001261 Homo sapiens RNA, U1 small nuclear pseudogene 8 (RNU1P8) on chromos NG 001262 Homo sapiens RNA, U1 small nuclear pseudogene 7 (RNU1P7) NG 001263 Homo sapiens RNA, U1 small nuclear pseudogene 6 (RNU1P6) on chromos NG\_001264 Homo sapiens RNA, U1 small nuclear pseudogene 5 (RNU1P5) on chromos NG 001265 Homo sapiens ATP-binding cassette, sub-family D (ALD), member 1, pseudo NG 001266 Homo sapiens poly(A) binding protein, cytoplasmic, pseudogene 3 (PABPCF NG\_001267 Homo sapiens poly(A) binding protein, cytoplasmic, pseudogene 2 (PABPCF NG\_001268 Homo sapiens poly(A) binding protein, cytoplasmic, pseudogene 1 (PABPCF NG\_001269 Homo sapiens ATP-binding cassette, sub-family D (ALD), member 1, pseudo NG 001270 Homo sapiens ATP-binding cassette, sub-family D (ALD), member 1, pseudo Homo sapiens molybdenum cofactor synthesis 1 pseudogene 1 (MOCS1P1) NG 001271 NG 001272 Homo sapiens G protein-coupled receptor 79 pseudogene (GPR79) on chror NG 001273 Homo sapiens mitogen-activated protein kinase kinase 1 pseudogene 1 (MA NG 001274 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 14B pseu NG\_001275 Homo sapiens chemokine (C-X-C motif) ligand 1 pseudogene (CXCL1P) on o NG 001276 Homo sapiens nuclease sensitive element binding protein 1 pseudogene (NS Homo sapiens capping protein (actin filament) muscle Z-line, alpha 1 pseudo NG 001277 NG 001278 Homo sapiens UDP glycosyltransferase 2 family, polypeptide B28 pseudoger NG 001279 Homo sapiens UDP glycosyltransferase 2 family, polypeptide B27 pseudoger NG 001280 Homo sapiens UDP glycosyltransferase 2 family, polypeptide B26 pseudoger NG 001281 Homo sapiens UDP glycosyltransferase 2 family, polypeptide B25 pseudoger

NG\_001282 Homo sapiens UDP glycosyltransferase 2 family, polypeptide B24 pseudoger NG\_001286 Homo sapiens fatty acid binding protein 3, pseudogene 2 (FABP3P2) on chr. NG 001287 Homo sapiens uracil-DNA glycosylase pseudogene 1 (UNGP1) on chromosc NG 001288 Homo sapiens uracil-DNA glycosylase pseudogene 2 (UNGP2) on chromosc NG 001289 Homo sapiens Zn-15 related zinc finger protein RLF pseudogene (RLFP) NG 001290 Homo sapiens 6-pyruvoyltetrahydropterin synthase pseudogene (PTS-P1) or NG 001291 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NG 001292 Homo sapiens recombining binding protein suppressor of hairless (Drosophil NG 001293 Homo sapiens COX17 pseudogene (LOC81993) on chromosome 13 NG 001294 Homo sapiens cytochrome P450, subfamily 51 pseudogene 1 (CYP51P1) on NG 001295 Homo sapiens ribosomal protein S19 pseudogene 1 (RPS19P1) on chromos NG 001296 Home saniens ribosomal protein S19 pseudogene 2 (RPS19P2) on chromos NG 001297 Homo saniens thioredoxin 1 pseudogene 2 (LOC93202) on chromosome 10 NG 001298 Homo sapiens family with sequence similarity 8, member A5 pseudogene (Fr NG\_001299 Homo sapiens family with sequence similarity 8, member A6 pseudogene (Fi NG\_001300 Homo sapiens cytochrome c oxidase subunit VIIb pseudogene 1 (COX7BP1) NG 001301 Homo sapiens ribosomal protein L37 pseudogene 2 (RPL37P2) on chromosomal pseudogene 2 (RPL37P2) on NG 001302 Homo sapiens ribosomal protein L3 pseudogene 2 (RPL3P2) on chromosom NG\_001303 Homo sapiens thioredoxin 1 pseudogene 4 (LOC124974) on chromosome 1: NG 001305 Homo saplens mitogen-activated protein kinase kinase 4 pseudogene (LOC1 NG 001306 Homo sapiens FBR-MuSV-associated ubiquitously expressed (fox derived) p NG 001307 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), gamma isc NG 001308 Home sapiens hydroxysteroid (17-beta) dehydrogenase 7 pseudogene 1 (H5 NG 001309 Homo sapiens thioredoxin 1 pseudogene 1 (LOC151276) on chromosome 2 NG 001311 Home sapiens deleted in split-hand/split-foot 1pseudogene (DSS1P1) on chr NG 001313 Homo sapiens lactate dehydrogenase pseudogene (LOC158222) on chromo NG\_001314 Homo sapiens PHD finger protein 10 pseudogene 1 (PHF10P1) on chromosi NG\_001315 Homo saplens chromobox homolog 3 gamma pseudogene (LOC159770) on NG\_001316 Homo sapiens ribosomal protein L7a pseudogene 2 (RPL7AP2) on chromos NG\_001317 Homo sapiens ribosomal protein L7a pseudogene 3 (RPL7AP3) on chromosi NG\_001318 Homo sapiens HSP40 pseudogene (HSP40) on chromosome 2 NG\_001319 Homo sapiens ubiquitin-conjugating enzyme-like (UBCH7N2) pseudogene or NG\_001321 Homo sapiens thioredoxin 1 pseudogene 6 (AF357533) on chromosome 1 NG\_001322 Homo saplens thioredoxin 1 pseudogene 7 (AF357534) on chromosome 2 NG\_001323 Homo sapiens glutaredoxin pseudogene 2 (GLRXP2) on chromosome 14 NG 001324 Homo sapiens thioredoxin 1 pseudogene 5 (AF357532) on chromosome 1 NG 001325 Homo sapiens EPF5 pseudogene (EPF5) on chromosome 9 NG 001326 Homo sapiens EPF8 pseudogene (EPF8) on chromosome 16 NG\_001328 Homo sapiens sperm autoantigenic protein 17 pseudogene 1 (SPA17P1) on NG 001329 Homo sapiens high mobility group AT-hook 1-like 2 (HMGA1L2) pseudogene NG 001330 Homo sapiens thioredoxin 1 pseudogene 3 (AF357530) on chromosome 4 NG\_001331 Homo sapiens 3-oxoacid CoA transferase 2 pseudogene (OXCT2P) on chror NG\_001332 Homo sapiens T cell receptor alpha delta locus (TCRA/TCRD) on chromosor NG 001333 Homo sapiens T cell receptor beta locus (TRB@) on chromosome 7 NG\_001334 Homo sapiens growth hormone locus (GH@) on chromosome 17 NG 001335 Homo sapiens genomic large histone family cluster (HFL@) on chromosome NG 001336 Homo sapiens T cell receptor gamma locus (TRG@) on chromosome 7 NG 001337 Homo sapiens T cell receptor beta variable orphans on chromosome 9 (TRB) NG 001526 Homo sapiens a disintegrin and metalloproteinase domain 3b (cyritestin 2) (/ NG 001528 Homo sapiens phosphoglycerate kinase 1, pseudogene 2 (PGK1P2) on chro NG 001529 Homo sapiens tyrosinase-like (TYRL) pseudogene on chromosome 11 NG 001531 Homo sapiens similar to tyrosine 3-monooxygenase/tryptophan 5-monooxyge NG 001532 Homo sapiens similar to casein kinase 1, alpha 1 (LOC120321) pseudogene NG 001533 Homo sapiens proteasome (prosome, macropain) subunit, beta type, 3 pseu-NG 001534 Homo sapiens legumain 2 pseudogene (LGMN2P) on chromosome 13 NG\_001535 Homo sapiens brain creatine kinase pseudogene (LOC124144) on chromoso NG 001537 Homo sapiens coactosin-like, Smith Magenis syndrome chromosome region

NG 001538 Homo sapiens proteasome (prosome, macropain) subunit, beta type, 3 pseu NG 001539 Homo sapiens mitochondrial ribosomal protein L9 pseudogene (MRPL9P1) c NG 001540 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NG 001541 Homo sapiens synaptogyrin 2 pseudogene (LOC138916) on chromosome 9 NG 001542 Homo sapiens similar to plasmolipin (LOC139061) pseudogene on chromoso NG\_001543 Homo sapiens peptidyl prolyl isomerase H (cyclophilin H) pseudogene (LOC NG\_001544 Homo sapiens eukaryotic translation initiation factor 3, subunit 6 interacting p NG 001545 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG 001546 Homo sapiens similar to yeast Upf3, variant A pseudogene (LOC147150) on NG 001547 Homo sapiens lectin, galactoside-binding, soluble, 9 (galectin 9) pseudogene NG 001548 Homo sapiens similar to yeast Upf3, variant A pseudogene (LOC147226) on NG 001549 Homo sapiens son-pseudogene (LOC148300) on chromosome 1 NG 001550 Homo sapiens u2 small nuclear ribonucleoprotein A pseudogene (LOC1504) NG 001551 Homo saniens u2 small nuclear ribonucleoprotein polypeptide A' pseudogeni NG 001552 Homo sapiens RAB6C, member RAS oncogene family pseudogene (LOC150 NG 001553 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG 001554 Homo sapiens RAB6C, member RAS oncogene family pseudogene (LOC150 NG\_001555 Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 1 pseudogene 1 (PF NG 001556 Homo sapiens protease (prosome, macropain) 26S subunit, ATPase, 1 pseu NG 001557 Homo sapiens similar to ART-4 protein (LOC152594) pseudogene on chromi NG 001558 Homo sapiens signal recognition particle 72kD pseudogene (LOC153932) or NG 001559 Homo sapiens protein phosphatase 2, regulatory subunit B (B56), epsilon isc NG 001560 Homo sapiens cell division cycle 20 pseudogene (LOC157956) on chromoso NG 001561 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG\_001562 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG 001563 Homo sapiens protein kinase C, jota pseudogene (LOC158948) on chromosi NG 001564 Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 6 ps NG 001566 Homo sapiens peptidylprolyl isomerase A (cyclophilin A)-like (PPIAL) pseudo NG\_001567 Homo sapiens ribonuclease H1 pseudogene 3 (RNASEH1P3) on chromoson NG 001568 Homo sapiens nitric oxide synthase 2A (inducible, hepatocytes) pseudogene NG 001569 Homo sapiens similar to high mobility group protein-R (LOC201958) pseudos NG 001571 Homo sapiens ribosomal protein L36a pseudogene (dJ507l15.1) on chromos NG 001572 Homo sapiens cyclin-dependent kinase 7 pseudogene (CDK7PS) on chromo NG 001573 Homo sapiens TAF13 RNA polymerase II, TATA box binding protein (TBP)-a NG 001574 Homo sapiens TBP-associated factor 9-like pseudogene (LOC246135) on ch NG 001576 Homo sapiens deltaNEMO (deltaNEMO) pseudogene on chromosome X NG\_001577 Homo sapiens CDC28 protein kinase regulatory subunit 1A (CKS1A) pseudo NG 001578 Homo sapiens CDC28 protein kinase regulatory subunit 1B pseudogene 2 (C NG 001579 Homo sapiens CDC28 protein kinase regulatory subunit 1B pseudogene 3 (C NG 001580 Homo sapiens YWHAQ pseudogene 2 (YWHAQP2) on chromosome 22 NG 001581 Homo sapiens transcription elongation factor B (SIII), polypeptide 2 (18kD, el NG 001582 Homo sapiens transcription elongation factor B (SIII), polypeptide 2 (18kD, el Homo sapiens ubiquitin carrier protein E2-EPF pseudogene (LOC246719) or NG 001583 NG 001584 Homo sapiens dynein, cytoplasmic, light polypeptide pseudogene (LOC2467 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NG 001585 Homo sapiens peptidyl prolyl isomerase H (cyclophilin H) pseudogene 1 (PP NG 001586 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG 001587 Homo sapiens homolog of C, elegans smu-1 pseudogene (LOC246784) on c NG 001588 Homo sapiens PTD004 pseudogene (LOC246785) on chromosome 22 NG 001589 NG 001590 Homo sapiens signal recognition particle 68kD pseudogene (LOC252840) or Homo sapiens signal recognition particle 68kD pseudogene (LOC252841) or NG 001591 NG 001592 Homo sapiens karyopherin (importin) beta 2 pseudogene (LOC252968) on cl NG 002151 Homo sapiens olfactory receptor, family 1, subfamily E, member 3 pseudoge NG 002153 Homo sapiens olfactory receptor, family 1, subfamily P, member 1 pseudoge NG\_002154 Homo sapiens olfactory receptor, family 8, subfamily C, member 1 pseudoge NG 002156 Homo sapiens olfactory receptor, family 8, subfamily B, member 1 pseudoge NG 002158 Homo sapiens olfactory receptor, family 7, subfamily E, member 41 pseudog

NG 002160 Homo sapiens olfactory receptor, family 7, subfamily E, member 5 pseudoge NG 002162 Homo sapiens olfactory receptor, family 7, subfamily E, member 4 pseudoge NG 002164 Homo sapiens olfactory receptor, family 7, subfamily E, member 87 pseudog NG 002166 Homo sapiens olfactory receptor, family 7, subfamily E, member 2 pseudoge NG 002168 Homo sapiens olfactory receptor, family 7, subfamily E, member 15 pseudog NG 002170 Homo sapiens olfactory receptor, family 7, subfamily A, member 3 pseudoge NG 002172 Homo sapiens olfactory receptor, family 5, subfamily D, member 3 pseudoge NG 002173 Homo sapiens olfactory receptor, family 4, subfamily A, member 1 pseudoge NG 002175 Homo sapiens olfactory receptor, family 7, subfamily E, member 14 pseudog NG 002177 Homo sapiens olfactory receptor, family 7, subfamily E, member 13 pseudog NG 002179 Homo sapiens olfactory receptor, family 7, subfamily E, member 12 pseudog NG 002181 Homo sapiens olfactory receptor, family 7, subfamily E, member 11 pseudog NG\_002183 Homo sapiens olfactory receptor, family 7, subfamily E, member 10 pseudog NG 002184 Homo sapiens olfactory receptor, family 4, subfamily C, member 1 pseudoge NG 002185 Homo sapiens olfactory receptor, family 4, subfamily H, member 8 pseudoge Homo sapiens olfactory receptor, family 7, subfamily E, member 16 pseudog NG 002189 Homo sapiens olfactory receptor, family 7, subfamily E, member 43 pseudog NG 002191 Homo sapiens olfactory receptor, family 9, subfamily A, member 1, pseudoge NG 002195 Homo sapiens olfactory receptor, family 12, subfamily D, member 1 pseudog NG 002196 NG\_002199 Homo sapiens olfactory receptor, family 51, subfamily A, member 1 pseudog NG 002200 Homo sapiens olfactory receptor, family 10, subfamily G, member 1 pseudog NG 002201 Homo sapiens olfactory receptor, family 10, subfamily B, member 1 pseudog NG\_002202 Homo sapiens olfactory receptor, family 8, subfamily B, member 7 pseudoge NG 002203 Homo sapiens offactory receptor, family 8, subfamily B, member 6 pseudoge NG\_002204 Homo sapiens olfactory receptor, family 8, subfamily B, member 5 pseudoge NG\_002205 Homo sapiens olfactory receptor, family 7, subfamily H, member 1 pseudoge NG\_002207 Homo sapiens olfactory receptor, family 7, subfamily E, member 8 pseudoge NG 002211 Homo sapiens olfactory receptor, family 7, subfamily E, member 33 pseudog NG 002212 Homo sapiens olfactory receptor, family 7, subfamily D, member 1 pseudoge NG 002215 Homo sapiens olfactory receptor, family 7, subfamily A, member 11 pseudog NG 002216 Homo sapiens olfactory receptor, family 2, subfamily N, member 1 pseudoge NG\_002218 Homo sapiens vomeronasal 1 receptor 7 pseudogene (VN1R7P) on chromos NG\_002219 Homo sapiens olfactory receptor, family 56, subfamily A, member 5 (OR56A! NG 002220 Homo sapiens olfactory receptor, family 52, subfamily X, member 1 pseudog NG 002221 Homo saplens olfactory receptor, family 7, subfamily E, member 94 pseudog NG\_002225 Homo sapiens olfactory receptor, family 7, subfamily E, member 93 pseudog NG 002229 Homo saplens olfactory receptor, family 4, subfamily C, member 7 pseudoge NG 002232 Homo sapiens olfactory receptor, family 51, subfamily P, member 1 pseudog NG 002233 Homo sapiens olfactory receptor, family 9, subfamily L, member 1 pseudoger NG 002234 Homo sapiens olfactory receptor, family 52, subfamily J, member 1 pseudogo NG 002235 Homo sapiens olfactory receptor, family 4, subfamily K, member 7 pseudoge NG 002236 Homo sapiens olfactory receptor, family 4, subfamily P, member 1 pseudoge NG 002238 Homo sapiens olfactory receptor, family 1, subfamily AA, member 1 pseudog NG\_002239 Homo sapiens olfactory receptor, family 2, subfamily AD, member 1 pseudoc NG\_002240 Homo sapiens olfactory receptor, family 4, subfamily K, member 6 pseudoge NG\_002241 Homo sapiens olfactory receptor, family 7, subfamily E, member 91 pseudog NG\_002242 Homo sapiens olfactory receptor, family 4, subfamily K, member 4 pseudoge NG 002243 Homo sapiens olfactory receptor, family 4, subfamily N, member 1 pseudoge NG 002246 Homo sapiens olfactory receptor, family 13, subfamily C, member 1 pseudog NG\_002247 Homo sapiens olfactory receptor, family 4, subfamily C, member 5 (OR4C5) NG 002250 Homo sapiens olfactory receptor, family 4, subfamily C, member 2 pseudoge NG\_002251 Homo sapiens olfactory receptor, family 7, subfamily E, member 83 pseudog NG 002252 Homo sapiens olfactory receptor, family 51, subfamily J, member 1 (OR51J1 NG 002253 Homo sapiens olfactory receptor, family 5, subfamily BD, member 1 pseudog NG 002254 Homo sapiens olfactory receptor, family 10, subfamily D, member 5 pseudog NG\_002255 Homo sapiens olfactory receptor, family 10, subfamily G, member 6 (OR10G NG 002256 Homo sapiens olfactory receptor, family 7, subfamily E, member 97 pseudog

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NG 002257 Homo sapiens olfactory receptor, family 2, subfamily AF, member 1 pseudog
NG 002258 Homo sapiens olfactory receptor, family 7, subfamily L, member 1 pseudoger
NG 002259 Homo sapiens olfactory receptor, family 10, subfamily R, member 1 pseudog
NG 002260 Homo sapiens olfactory receptor, family 10, subfamily T, member 1 pseudog-
NG 002261 Homo sapiens olfactory receptor, family 10, subfamily G, member 5 pseudog
NG 002262 Homo sapiens olfactory receptor, family 52, subfamily S, member 1 pseudog
NG 002263 Homo sapiens olfactory receptor, family 51, subfamily A, member 5 pseudog
NG_002264 Homo sapiens olfactory receptor, family 4, subfamily C, member 10 pseudog
NG_002265 Homo sapiens olfactory receptor, family 4, subfamily R, member 1 pseudoge
NG_002266 Homo sapiens olfactory receptor, family 52, subfamily J, member 2 pseudogo
NG 002267 Homo sapiens olfactory receptor, family 4, subfamily C, member 9 pseudoge
NG 002268 Home sapiens olfactory receptor, family 51, subfamily A, member 3 pseudog
NG 002269 Homo sapiens olfactory receptor, family 52, subfamily E, member 3 pseudog
NG 002270 Homo sapiens olfactory receptor, family 4, subfamily V, member 1 pseudoge
NG 002271 Homo sapiens olfactory receptor, family 7, subfamily E, member 90 pseudog
NG_002272 Homo sapiens olfactory receptor, family 7, subfamily E, member 89 pseudog
NG_002273 Homo sapiens olfactory receptor, family 2, subfamily AL, member 1 pseudog
NG_002274 Homo sapiens olfactory receptor, family 6, subfamily J, member 1 (OR6J1) p
NG 002275 Homo sapiens olfactory receptor, family 4, subfamily C, member 4 pseudoge
NG 002277 Homo sapiens olfactory receptor, family 5, subfamily D, member 2 pseudoge
NG 002278 Homo sapiens olfactory receptor, family 7, subfamily A, member 18 pseudog
NG 002279 Homo sapiens olfactory receptor, family 9, subfamily 1, member 2 pseudoger
NG 002281 Homo saplens olfactory receptor, family 5, subfamily M, member 13 pseudog
NG 002282 Homo sapiens olfactory receptor, family 6, subfamily L, member 1 pseudogei
NG 002284 Homo sapiens ubiquitin B pseudogene 1 (UBBP1) on chromosome 2
NG 002285 Homo sapiens ubiquitin B pseudogene 4 (UBBP4) on chromosome 17
NG 002286 Homo sapiens ubiquitin B pseudogene 3 (UBBP3) on chromosome 2
NG 002287 Homo saniens ubiquitin B pseudogene 2 (UBBP2) on chromosome 1
NG 002288 Home sapiens suppressor of bimD6 homelog pseudogene (LOC122145) on
NG 002289 Homo sapiens serine hydroxymethyltransferase 1 (soluble) pseudogene (SH
NG_002290 Homo sapiens DKFZP434J193-like pseudogene (LOC259308) on chromoso
NG 002291 Homo sapiens splicing factor 3b, subunit 4, 49kD pseudogene (LOC260329)
NG 002298 Homo sapiens olfactory receptor, family 1, subfamily D, member 3 pseudoge
NG 002299 Homo sapiens olfactory receptor, family 5, subfamily G, member 1 pseudoge
NG 002302 Homo sapiens olfactory receptor, family 1, subfamily R, member 1 pseudoge
NG 002305 Homo sapiens olfactory receptor, family 5, subfamily B, member 1 pseudoge
NG_002306 Homo sapiens olfactory receptor, family 5, subfamily B, member 10 pseudog
NG_002307 Homo sapiens olfactory receptor, family 4, subfamily H, member 6 pseudoge
NG_002311 Homo saplens olfactory receptor, family 7, subfamily A, member 15 pseudog
NG 002315 Homo sapiens olfactory receptor, family 7, subfamily E, member 26 pseudog
NG 002316 Homo sapiens olfactory receptor, family 7, subfamily E, member 53 pseudog
NG 002317 Homo sapiens olfactory receptor, family 7, subfamily E, member 62 pseudog
NG 002319 Homo sapiens olfactory receptor, family 2, subfamily H, member 5 pseudoge
NG 002320 Homo sapiens NADH dehydrogenase 2 pseudogene 2 (MTND2P2) on chrorr
             Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 6 psei
NG 002321
NG 002322 Homo sapiens olfactory receptor, family 8, subfamily B, member 9 pseudoge
NG 002323 Homo sapiens high mobility group AT-hook 1-like 3 (HMGA1L3) pseudogene
NG 002324 Homo sapiens high mobility group AT-hook 1-like 1 (HMGA1L1) pseudogene
NG 002325 Homo sapiens COP9 pseudogene (bA345E19.2) on chromosome X
NG 002326 Homo sapiens dihydrolipoamide S-succinyltransferase pseudogene (E2 com
NG 002327 Homo sapiens HSA12cenp11 beta-tubulin 4Q (TUBB4Q) pseudogene (LOC
NG 002328 Homo sapiens polypyrimidine tract binding protein 1 pseudogene (PTBP1P)
NG_002329 Homo sapiens protease, serine, 29 pseudogene (PRSS29P) on chromosome
NG 002331
             Homo sapiens apolipoprotein B mRNA editing enzyme, catalytic polypeptide
NG 002332 Homo sapiens fascin pseudogene (LOC145989) on chromosome 15
NG 002333 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 psei
NG 002334 Homo sapiens HSA16g24 beta-tubulin 4Q pseudogene (LOC197331) on chr
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NG 002335 Homo sapiens HSA1q43-44 beta-tubulin 4Q (TUBB4Q) pseudogene (LOC20 NG 002336 Homo sapiens tubulin, beta polypeptide pseudogene 5 (TUBBP5) on chromo NG 002337 Homo sapiens olfactory receptor, family 5, subfamily AK, member 4 pseudog NG 002338 Homo sapiens HSA1q42.3 beta-tubulin 4Q pseudogene (LOC255208) on chi NG 002339 Homo sapiens HSA18p11 beta-tubulin 4Q pseudogene (LOC260334) on chr NG 002340 Homo sapiens ELF2P2 pseudogene (ELF2P2) NG 002341 Homo sapiens ELF2P3 pseudogene (AF256221) on chromosome 9 NG 002342 Homo sapiens zinc finger protein Np97 pseudogene (LOC260337) on chrom-NG 002343 Homo sapiens HSA12cenq11 beta-tubulin 4Q (TUBB4Q) pseudogene (LOC2 NG 002348 Homo sapiens sorting nexin 6 pseudogene (LOC126506) on chromosome 19 NG 002349 Homo sapiens eukaryotic translation elongation factor 1 alpha-like 11 (EEF1, NG 002350 Homo sapiens eukaryotic translation elongation factor 1 alpha 1 pseudogene NG\_002351 Homo sapiens sorting nexin 7 pseudogene (LOC203930) on chromosome 11 NG 002352 Homo sapiens actin related protein 2/3 complex subunit 1A pseudogene (LO NG 002353 Homo sapiens eukaryotic translation elongation factor 1 alpha 1 pseudogene NG 002354 Homo sapiens actin related protein 2/3 complex subunit 1A pseudogene (LO NG 002355 Homo sapiens actin related protein 2/3 complex subunit 1A pseudogene (LO NG 002356 Homo saplens olfactory receptor, family 7, subfamily E, member 19 pseudog NG 002357 Homo sapiens olfactory receptor, family 5, subfamily AH, member 1 pseudog NG 002360 Homo sapiens ribosomal protein S2 pseudogene (LOC125208) on chromoso NG 002361 Homo sapiens CGI-148 protein pseudogene (CGI-148P) on chromosome 16 NG 002363 Homo sapiens actin related protein 2/3 complex, subunit 3B, 21kDa (ARPC3 NG\_002364 Homo sapiens tumor-associated calcium signal transducer 1 pseudogene (Li NG 002365 Homo sapiens nitric oxide synthase 2A (inducible, hepatocytes) pseudogene NG\_002366 Homo sapiens NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 9, p NG\_002367 Homo saplens family with sequence similarity 12, member C pseudogene (F. NG\_002368 Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 3 pt NG\_002369 Homo sapiens Charot-Leyden crystal protein pseudogene 1 (CLCP1) on chr NG 002370 Homo sapiens NS1-associated protein 1 pseudogene (LOC149844) on chror NG\_002371 Homo sapiens dendritic cell protein pseudogene (LOC266683) on chromosol NG 002372 Homo sapiens embryonic ectoderm development pseudogene (LOC266694) NG 002373 Homo sapiens enhancer of zeste homolog 2 (Drosophila) pseudogene (LOC: NG 002374 Homo sapiens POM121 membrane glycoprotein-like 4 pseudogene (rat) (PO NG 002375 Homo sapiens oligophrenin 1 pseudogene 1 (OPHN1P1) on chromosome 22 NG\_002376 Homo sapiens fatty acid binding protein 5, pseudogene 1 (FABP5P1) on chro NG 002378 Homo sapiens ash2 (absent, small, or homeotic)-like (Drosophila) pseudogei NG\_002379 Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 6 ps NG 002380 Homo sapiens heat shock 70kDa protein 9B pseudogene (HSPA9BP) on chr NG 002381 Homo sapiens ubiquitin protein Ilgase E3A pseudogene 1 (UBE3AP1) on chr NG 002382 Homo sapiens melanoma antigen pseudogene, family A (psMAGEA) on chrc NG 002383 Homo sapiens keratin 19 pseudogene (LOC160313) on chromosome 12 NG 002384 Homo sapiens nucleoporin 50 pseudogene (NUP50P) on chromosome 14 NG 002385 Homo sapiens tropomyosin-like (LOC146253) pseudogene on chromosome NG 002387 Homo sapiens proteasome 26S non-ATPase subunit 2 pseudogene (LOC26) NG\_002388 Homo sapiens nucleoporin 50kDa pseudogene (LOC266785) on chromosom NG 002389 Homo sapiens nucleoporin 50 kDa pseudogene (LOC266786) on chromosor NG 002392 Homo sapiens major histocompatibility complex, class II, DR52 haplotype (D Homo sapiens adenylate kinase 2 pseudogene (AK2B) on chromosome 1 NG 002393 NG 002394 Homo sapiens calcium-binding tyrosine phosphorylation-regulated protein ps NG 002395 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, Homo saplens major histocompatibility complex, class I, BC (HLA-BC) on chi NG 002397 NG\_002398 Homo sapiens major histocompatibility complex, class I, GHKAJ (HLA-GHKA NG 002399 Homo sapiens transcription elongation factor B (SIII), polypeptide 1 pseudog NG 002400 Homo sapiens piggyBac transposable element derived 3 pseudogene 1 (PGI NG 002401 Homo sapiens piggyBac transposable element derived 3 pseudogene 2 (PGI NG 002402 Homo sapiens piggyBac transposable element derived 3 pseudogene 3 (PGI NG 002403 Homo sapiens piggyBac transposable element derived 3 pseudogene 4 (PGI

NG 002404 Homo sapiens ribosomal protein S9 pseudogene 2 (RPS9P2) on chromosom NG 002405 Homo sapiens RNA, U12 small nuclear pseudogene (RNU12P) on chromosc NG 002406 Homo sapiens olfactory receptor, family 5, subfamily G, member 3 pseudoge NG 002408 Homo sapiens olfactory receptor, family 13, subfamily C, member 7 pseudog NG 002409 Homo sapiens olfactory receptor, family 5, subfamily AX, member 1 (OR5AX NG 002410 Homo sapiens musashi 1 pseudogene (LOC268276) on chromosome 11 NG 002411 Homo sapiens suppressor of cytokine signaling 2 pseudogene 1 (SOCS2P1) NG\_002412 Homo sapiens proteasome 26S non-ATPase subunit 7 pseudogene (LOC28) NG 002415 Homo sapiens RNA binding motif protein 8B pseudogene (RBM8B) on chron NG 002416 Homo sapiens mitochondrial ribosomal protein L11 pseudogene (MRPL11P2 Homo sapiens proteasome 26S non-ATPase subunit 10 pseudogene (LOC2) NG 002417 Homo sapiens similar to Homeobox protein Meis3 (Meis1-related protein 2) ( NG 002418 Homo saplens eukaryotic translation initiation factor 1A pseudogene 1 (EIF1) NG 002419 Homo sapiens CD8 antigen, beta polypeptide 2, pseudogene (p37) (CD8B2) NG 002423 NG 002425 Homo sapiens RNA, 7SL, cytoplasmic, pseudogene 1 (RN7SLP1) Homo sapiens RNA, 7SL, cytoplasmic, pseudogene 2 (RN7SLP2) on chromo NG 002426 Homo sapiens RNA, 7SL, cytoplasmic, pseudogene 3 (RN7SLP3) NG 002427 NG 002428 Homo sapiens RNA, 7SL, cytoplasmic, pseudogene 4 (RN7SLP4) on chromo Homo sapiens RNA, 7SL, cytoplasmic, pseudogene 5 (RN7SLP5) on chromo NG 002429 Homo sapiens mitochondrial ribosomal protein L48 pseudogene 1 (MRPL48i NG\_002430 Homo sapiens nuclear autoantigenic sperm protein pseudogene 1 (NASPP1 NG 002431 NG\_002432 Homo sapiens major histocompatibility complex, class II, DR51 haplotype (D NG 002433 Homo sapiens major histocompatibility complex, class II, DR53 haplotype (D NG\_002434 Homo sapiens pre-B-cell leukemia transcription factor pseudogene 1 (PBXP NG 002437 Homo sapiens cytochrome b-5 pseudogene 3 (CYB5P3) on chromosome 14 NG 002438 Homo sapiens LEFTY family pseudogene (LEFTY3) on chromosome 1 NG 002440 Homo sapiens TGFB-induced factor (TALE family homeobox) pseudogene (L NG 002448 Homo sapiens mitogen-activated protein kinase 6 pseudogene 2 (MAPK6PS NG 002449 Homo sapiens mitogen-activated protein kinase 6 pseudogene 6 (MAPK6PS NG 002450 Homo sapiens cytokine receptor-like factor 3 pseudogene (LOC285706) on c NG 002451 Homo saplens mitogen-activated protein kinase 6 pseudogene 4 (MAPK6PS NG\_002452 Homo sapiens mitogen-activated protein kinase 6 pseudogene 5 (MAPK6PS NG 002453 Homo sapiens mitogen-activated protein kinase 6 pseudogene 3 (MAPK6PS NG\_002454 Homo sapiens mitogen-activated protein kinase 6 pseudogene 1 (MAPK6PS NG\_002456 Homo saplens ribosomal protein L32-like 2 (RPL32L2) pseudogene on chror NG\_002457 Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1-li Homo sapiens actin, beta-like 1 (ACTBL1) pseudogene on chromosome 22 NG 002458 Homo sapiens vomeronasal 1 receptor 9 pseudogene (VN1R9P) on chromos NG 002459 NG 002460 Homo saplens high-mobility group nucleosomal binding domain 2 pseudoger NG 002461 Homo sapiens ataxin 2 related protein pseudogene (LOC317727) on chromo Homo saplens basic leucine zipper nuclear factor 2 pseudogene (BLZF2P) o NG 002462 NG\_002463 Homo sapiens proteasome 26S non-ATPase subunit 12 pseudogene (LOC3 Homo sapiens steroidogenic acute regulator pseudogene 1 (STARP1) on chi NG 002464 NG\_002465 Homo sapiens chromosome 14 open reading frame 55 (C14orf55) pseudoge Homo sapiens a disintegrin and metalloproteinase domain 21 pseudogene (/ NG 002467 NG\_002468 Homo sapiens ribosomal protein L9 pseudogene (LOC254948) on chromoso NG 002469 Homo sapiens bromodomain containing 7 pseudogene (BRD7P) on chromos NG 002470 Homo sapiens basic transcription factor 3, pseudogene 2 (BTF3P2) on chror NG 002471 Homo sapiens ribosomal protein L9 pseudogene (LOC317771) on chromoso NG 002472 Homo sapiens CDC10 cell division cycle 10 homolog (S. cerevisiae) pseudor NG 002473 Homo sapiens cysteine and histidine-rich domain (CHORD)-containing 2 pse NG 002474 Homo saplens CCNDBP1 interactor pseudogene (CBPINP) on chromosome NG 002475 Homo sapiens CDC28 protein kinase regulatory subunit 1B pseudogene (CK NG 002476 Homo sapiens coilin pseudogene (COILP) on chromosome 14 NG 002477 Homo sapiens cytochrome c oxidase subunit Va pseudogene 2 (COX5AP2): NG 002478 Homo sapiens ras homolog gene family, member Q pseudogene (RHOQP) c NG 002479 Homo sapiens cytochrome c oxidase subunit VIIa polypeptide 3 pseudogene WO05044981 [file:///E:/WO05044981.apc]

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NG 002480 Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 18 pseudogene 1 (I NG 002481 Homo sapiens G protein-coupled receptor 57 (GPR57) pseudogene on chror NG 002482 Homo sapiens ribosomal protein L21 pseudogene 12 (RPL21P12) on chrome NG\_002483 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) pseudogene 4 (PPI) NG\_002484 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) pseudogene 5 (PPI NG 002485 Homo sapiens Friedreich ataxia pseudogene (FRDAP) on chromosome 14 NG 002486 Homo sapiens laminin receptor 1 pseudogene 4 (LAMR1P4) on chromosome NG 002487 Homo sapiens ribosomal protein L21 pseudogene 7 (RPL21P7) on chromosomal pseudogene 7 (RPL21P7) on NG 002488 Homo sapiens ribosomal protein L21 pseudogene 11 (RPL21P11) on chroma NG\_002489 Homo sapiens laminin receptor 1 pseudogene 3 (LAMR1P3) on chromosomo NG 002490 Homo sapiens ubiquitin-conjugating enzyme E2L 7 pseudogene (UBE2L7) o NG 002491 Homo sapiens ribosomal protein L21 pseudogene 9 (RPL21P9) on chromosomal pseudogene 9 (RPL21P9) on NG 002492 Homo sapiens Rho GTPase activating protein 16 pseudogene (ARHGAP16F NG 002493 Homo sapiens DnaJ (Hsp40) homolog, subfamily C, member 8 pseudogene NG 002494 Homo sapiens eukaryotic translation elongation factor 1 alpha 1 pseudogene NG 002495 Homo sapiens endosulfine alpha pseudogene 2 (ENSAP2) on chromosome NG\_002496 Homo sapiens eukaryotic translation initiation factor 2, subunit 2 beta, pseud NG\_002497 Homo sapiens ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G pse NG\_002498 Homo saplens eukaryotic translation Initiation factor 3, subunit 6 interacting p NG\_002499 Homo sapiens eukaryotic translation initiation factor 4B pseudogene (EIF4BF NG 002500 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NG\_002501 Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG 002502 Homo saplens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase acti NG\_002503 Homo sapiens uracll-DNA glycosylase pseudogene 3 (UNGP3) on chromosc NG 002504 Homo sapiens zinc finger protein 405 pseudogene (ZNF405P) on chromosor NG 002505 Homo sapiens asparaginyl-tRNA synthetase pseudogene (NARSP) on chron NG\_002506 Homo sapiens peptidylprolyl isomerase A (cyclophilin A) pseudogene 6 (PPI NG\_002507 Homo sapiens laminin receptor 1 pseudogene 5 (LAMR1P5) on chromosome NG 002508 Home sapiens high-mobility group box 1 pseudogene (HMGB1P) on chromos NG 002509 Homo sapiens high-mobility group nucleosome binding domain 1 pseudogen NG 002510 Homo sapiens high-mobility group nucleosomal binding domain 2 pseudoger NG 002511 Homo sapiens heterogeneous nuclear ribonucleoprotein C pseudogene (HNI NG 002512 Homo sapiens heterogeneous nuclear ribonucleoprotein U pseudogene (HNI NG 002513 Homo sapiens ribosomal protein L10a pseudogene 1 (RPL10AP1) on chrom-NG 002514 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NG\_002515 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su NG\_002516 Homo sapiens BCL2/adenovirus E1B 19kDa interacting protein 3 pseudogen NG 002517 Homo sapiens glycine C-acetyltransferase pseudogene (GCATP) on chromo NG\_002518 Homo sapiens ribosomal protein L12 pseudogene 5 (RPL12P5) on chromosomal pseudogene 5 (RPL12P5) on NG 002519 Homo sapiens ribosomal protein L21 pseudogene 10 (RPL21P10) on chrome NG 002520 Homo sapiens ribosomal protein L21 pseudogene 13 (RPL21P13) on chromo NG 002521 Homo sapiens ribosomal protein L21 pseudogene 8 (RPL21P8) on chromoso NG 002522 Homo sapiens ribosomal protein S2 pseudogene 4 (RPS2P4) on chromosom NG 002523 Homo sapiens ribosomal protein S29 pseudogene 1 (RPS29P1) on chromos NG 002524 Homo sapiens ubiquitin A-52 residue ribosomal protein fusion product 1 pset NG\_002525 Homo sapiens ribosomal protein L24 pseudogene 3 (RPL24P3) on chromosomal pseudogen Homo sapiens ribosomal protein, large, P1 pseudogene 1 (RPLP1P1) on chr NG 002526 Homo sapiens ribosomal protein L26 pseudogene 4 (RPL26P4) on chromosomal NG 002527 NG 002528 Homo sapiens ubiquitin-conjugating enzyme E2C pseudogene 1 (UBE2CP1) NG 002529 Homo sapiens tubulin, beta polypeptide pseudogene 3 (TUBBP3) on chromo NG\_002530 Homo sapiens serine/threonine kinase 16 pseudogene (STK16P) on chromo NG 002531 Homo sapiens abl-interactor 1 pseudogene (ABI1P) on chromosome 14 NG 002532 Homo sapiens spermidine synthase pseudogene 2 (SRMP2) on chromosome NG 002533 Homo sapiens small nuclear ribonucleoprotein polypeptide G pseudogene (\$ NG 002534 Homo sapiens solute carrier family 20 (phosphate transporter), member 1 ps NG 002535 Homo sapiens ribosomal protein L12 pseudogene 7 (RPL12P7) on chromoso NG 002537 Homo sapiens SET pseudogene 2 (SETP2) on chromosome 14

NG\_002538 Homo sapiens ribosomal protein L13a pseudogene 2 (RPL13AP2) on chrom-NG\_002539 Homo sapiens ribosomal protein L15 pseudogene 2 (RPL15P2) on chromoso NG\_002540 Homo sapiens ribosomal protein L17 pseudogene 3 (RPL17P3) on chromosomal NG\_002541 Homo sapiens ribosomal protein L17 pseudogene 4 (RPL17P4) on chromoso NG 002542 Homo sapiens ribosomal protein L18a pseudogene 1 (RPL18AP1) on chrom-NG\_002543 Homo sapiens ribosomal protein L18 pseudogene 1 (RPL18P1) on chromoso NG 002544 Homo sapiens ribosomal protein L22 pseudogene 2 (RPL22P2) on chromoso NG 002545 Homo sapiens ribosomal protein L23a pseudogene 10 (RPL23AP10) on chro NG 002546 Homo sapiens ribosomal protein L23a pseudogene 11 (RPL23AP11) on chro NG\_002547 Homo sapiens eukaryotic translation initiation factor 4E binding protein 1 pse NG\_002548 Homo sapiens heat shock factor binding protein 1 pseudogene 1 (HSBP1P1) NG\_002549 Homo sapiens ribosomal protein L26 pseudogene 2 (RPL26P2) on chromoso NG\_002550 Homo sapiens ribosomal protein L26 pseudogene 3 (RPL26P3) on chromosomal NG 002551 Homo sapiens ribosomal protein L27 pseudogene 1 (RPL27P1) on chromoso NG\_002552 Homo sapiens heat shock 10kDa protein 1 (chaperonin 10) pseudogene 2 (F NG\_002553 Homo sapiens ribosomal protein L36a pseudogene 2 (RPL36AP2) on chrom-NG\_002554 Homo sapiens NEK2 pseudogene (NEK2P) on chromosome 14 NG\_002555 Homo sapiens ribosomal protein L36a pseudogene 3 (RPL36AP3) on chrom-NG 002556 Homo sapiens ribosomal protein L36a pseudogene 4 (RPL36AP4) on chrom-NG\_002557 Homo sapiens molybdenum cofactor synthesis 3 pseudogene (MOCS3P) on NG 002558 Homo sapiens ribosomal protein L39 pseudogene 2 (RPL39P2) on chromosomal NG\_002559 Homo sapiens ribosomal protein L3 pseudogene 4 (RPL3P4) on chromosom NG\_002560 Homo sapiens ribosomal protein L41 pseudogene 4 (RPL41P4) on chromosomal Homo sapiens ribosomal protein L7a pseudogene 5 (RPL7AP5) on chromos NG 002561 NG 002562 Homo sapiens ribosomal protein L7a pseudogene 6 (RPL7AP6) on chromos Homo saplens ribosomal protein L9 pseudogene 6 (RPL9P6) on chromosom NG 002563 Homo sapiens ribosomal protein S12 pseudogene 1 (RPS12P1) on chromos NG 002564 Homo sapiens pituitary tumor-transforming 4 pseudogene (PTTG4P) on chro NG 002565 NG 002566 Homo sapiens ribosomal protein S15a pseudogene 2 (RPS15AP2) on chrom NG\_002567 Homo saplens ribosomal protein S15a pseudogene 3 (RPS15AP3) on chrom NG\_002568 Homo sapiens olfactory receptor, family 11, subfamily H, member 8 pseudog NG\_002570 Homo sapiens ribosomal protein S18 pseudogene 2 (RPS18P2) on chromos NG\_002571 Homo sapiens ribosomal protein S24 pseudogene 2 (RPS24P2) on chromos NG\_002572 Homo saplens ribosomal protein S24 pseudogene 3 (RPS24P3) on chromos NG 002573 Homo sapiens ribosomal protein S27a pseudogene 4 (RPS27AP4) on chrom NG\_002574 Homo sapiens ribosomal protein S8 pseudogene 1 (RPS8P1) on chromosom NG\_002575 Homo saplens ribosomal protein S2 pseudogene 2 (RPS2P2) on chromosom NG 002576 Homo saplens ribosomal protein S2 pseudogene 3 (RPS2P3) on chromosom NG 002577 Homo sapiens SSX1 pseudogene (psiSSX1) on chromosome X NG\_002578 Homo saplens SSX4 pseudogene (psiSSX4) on chromosome X NG\_002579 Homo sapiens SSX5 pseudogene (psiSSX5) on chromosome X NG\_002580 Homo sapiens SSX3 pseudogene (psiSSX3) on chromosome X NG\_002581 Homo sapiens mago-nashl homolog, proliferation-associated pseudogene (C NG\_002582 Homo sapiens SSX2 pseudogene (psiSSX2) on chromosome X NG 002583 Homo sapiens psiSSX8 pseudogene (psiSSX8) on chromosome X NG 002584 Homo sapiens SSX9 pseudogene (psiSSX9) on chromosome X NG\_002585 Homo sapiens SSX6 pseudogene (psiSSX6) on chromosome X NG 002586 Homo sapiens SSX10 pseudogene (psiSSX10) on chromosome 6 NG 002587 Homo sapiens SSX7 pseudogene (psiSSX7) on chromosome X NG 002588 Homo sapiens mortality factor 4 like pseudogene 1 (MORF4LP1) on chromos NG\_002589 Homo sapiens mortality factor 4 like pseudogene 2 (MORF4LP2) on chromos NG 002590 Homo sapiens mortality factor 4 like pseudogene 3 (MORF4LP3) on chromos NG 002591 Homo sapiens mortality factor 4 like pseudogene 4 (MORF4LP4) on chromos NG\_002592 Homo sapiens MAD2 mitotic arrest deficient-like 1 (yeast) pseudogene (MAC NG 002593 Homo sapiens cytochrome c oxidase pseudogene 2 (MTCO1P2) on chromos NG 002594 Homo sapiens nuclear receptor coactivator 4 pseudogene (NCOA4P) on chri NG\_002595 Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8, ps

NG\_002596 Homo sapiens nicotinamide nucleotide adenylytransferase pseudogene (NN NG\_002597 Homo sapiens nucleophosmin 1 (nucleolar phosphoprotein B23, numatrin) p NG 002598 Homo saplens 5',3'-nucleotidase, cytosolic pseudogene 1 (NT5CP1) on chro NG 002599 Homo sapiens 5',3'-nucleotidase, cytosolic pseudogene 2 (NT5CP2) on chro NG\_002601 Homo sapiens UDP glycosyltransferase 1 family, polypeptide A cluster (UGT NG\_002603 Homo sapiens nuclear transport factor 2 pseudogene 2 (NUTF2P2) on chron NG\_002604 Homo sapiens prostatic binding protein pseudogene 1 (PBPP1) on chromoso NG\_002605 Homo sapiens PCQAP pseudogene (PCQAPP) on chromosome 14 NG\_002606 Homo sapiens PDZ and LIM domain 1 pseudogene (PDLIM1P) on chromoso NG\_002607 Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 3 psei NG\_002608 Homo sapiens prothymosin, alpha pseudogene 7 (PTMAP7) on chromosome NG\_002609 Homo sapiens RAN binding protein 20 pseudogene (RANBP20P) on chromo NG\_002610 Homo sapiens replication protein A2 pseudogene (RPA2P) on chromosome NG 002611 Homo sapiens interleukin 6 signal transducer (gp130, oncostatin M receptor) NG 002612 Homo saplens family with sequence similarity 16, member A, Y-linked (FAM1 NG 002613 Homo sapiens family with sequence similarity 16, member B (FAM16B) pseu NG\_002616 Homo sapiens histone 2, H3b (HIST2H3B) pseudogene on chromosome 1 NG\_002617 Homo sapiens histone 2, H3a (HIST2H3A) pseudogene on chromosome 1 NG 002618 Homo sapiens histone 3, H2ba (HIST3H2BA) pseudogene on chromosome 1 NG\_002619 Homo sapiens histone 2, H2bc (HIST2H2BC) pseudogene on chromosome 1 NG\_002620 Homo sapiens histone 2, H2bd (HIST2H2BD) pseudogene on chromosome ' NG\_002621 Homo sapiens histone 2, H2ba (HIST2H2BA) pseudogene on chromosome 1 NG 002622 Homo sapiens ELYS transcription factor-like protein TMBS62 pseudogene (L. NG\_002623 Homo saplens ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase NG\_002624 Homo sapiens adaptin, beta 1-like 2 (ADTB1L2) pseudogene on chromosom NG 002625 Homo sapiens adaptin, beta 1-like 1 (ADTB1L1) pseudogene on chromosom NG 002626 Homo saplens proteasome (prosome, macropain) activator subunit 2 pseudo NG 002627 Homo saplens proteasome 26S non-ATPase subunit 10 pseudogene (LOC3: NG\_002628 Homo sapiens proteasome activator subunit 2 pseudogene (LOC338095) on NG\_002629 Homo saplens proteasome activator subunit 2 pseudogene (LOC338096) on NG\_002630 Homo saplens proteasome activator subunit 2 pseudogene (LOC338097) on NG\_002631 Homo sapiens proteasome activator subunit 2 pseudogene (LOC338098) on NG\_002632 Homo sapiens proteasome activator subunit 2 pseudogene (LOC338099) on NG\_002633 Homo saplens cytochrome c oxidase subunit Vb-like 7 (COX5BL7) pseudoge NG\_002634 Homo sapiens serum amyloid A3 pseudogene (SAA3P) on chromosome 11 NG\_002636 Homo sapiens YME1-like 2 (S. cerevisiae) (YME1L2) pseudogene on chromo NG\_002637 Homo sapiens arginino succinate lyase-like (ASLL) pseudogene on chromoso NG\_002638 Homo sapiens colony stimulating factor 2 receptor, beta, 2 (CSF2RB2) pseux NG 002639 Homo sapiens inorganic pyrophosphatase pseudogene (LOC151842) on chr NG\_002640 Homo sapiens mannan-binding lectin serine protease 1 pseudogene 1 (MAS NG\_002641 Homo saplens inorganic pyrophosphatase pseudogene (LOC285591) on chr NG\_002642 Homo sapiens SULT1D pseudogene (SULT1D1P) on chromosome 4 NG\_002645 Homo sapiens serine (or cysteine) proteinase inhibitor, clade B (ovalbumin), NG\_002646 Homo sapiens high-mobility group (nonhistone chromosomal) protein 17-like NG\_002647 Homo sapiens vomeronasal 1 receptor 8 pseudogene (VN1R8P) on chromos NG\_002648 Homo sapiens mitochondrial ribosomal protein S16 pseudogene (MRPS16P NG 002649 Homo sapiens mitochondrial ribosomal protein S16 pseudogene (MRPS16P: NG\_002650 Homo sapiens mitochondrial ribosomal protein S24 pseudogene (MRPS24P NG\_002651 Homo sapiens mitochondrial ribosomal protein S25 pseudogene (MRPS25P NG 002652 Homo sapiens histone 2, H2bb (HIST2H2BB) pseudogene on chromosome 1 NG 002653 Homo saplens taste receptor, type 2, member 62 pseudogene (TAS2R62P) ( NG 002655 Homo saplens ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase NG 002656 Homo sapiens ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase NG 002657 Homo sapiens DEAH (Asp-Glu-Ala-His) box polypeptide 9 pseudogene (DH) NG 002658 Homo sapiens eukaryotic translation initiation factor 4E-like 2 (EIF4EL2) psei NG 002659 Homo sapiens zinc finger pseudogene (BA393J16.4) on chromosome 10 NG\_002660 Homo sapiens KRAB box zinc finger protein pseudogene (BA775A3.1) on ch

NG 002661 Home sapiens hypothetical pseudogene bA291L22.4 (bA291L22.4) on chron NG 002662 Homo sapiens mitochondrial ribosomal protein S5 pseudogene (MRPS5P3) NG 002663 Home sapiens mitochondrial ribosomal protein S21 pseudogene (MRPS21P NG 002665 Homo sapiens mitochondrial ribosomal protein L42 pseudogene (MRPL42P1 NG 002666 Homo sapiens mitochondrial ribosomal protein S18C pseudogene (MRPS18 NG 002667 Homo sapiens keratin associated protein 13 pseudogene 1 (KRTAP13P1) or NG\_002668 Homo sapiens keratin associated protein 13 pseudogene 2 (KRTAP13P2) or NG 002669 Homo sapiens keratin associated protein 8 pseudogene 1 (KRTAP8P1) on cl NG 002670 Homo sapiens keratin associated protein 8 pseudogene 2 (KRTAP8P2) on d NG 002671 Homo sapiens keratin associated protein 19 pseudogene 3 (KRTAP19P3) or NG 002672 Homo sapiens keratin associated protein 19 pseudogene 4 (KRTAP19P4) or NG 002673 Homo sapiens keratin associated protein 21 pseudogene 1 (KRTAP21P1) or NG 002674 Homo sapiens taste receptor, type 2, member 64 pseudogene (TAS2R64P) NG 002675 Home sapiens taste receptor, type 2, member 63 pseudogene (TAS2R63P) ( NG 002676 Homo sapiens taste receptor, type 2, member 65 pseudogene (TAS2R65P) NG 002679 Homo sapiens potassium large conductance calcium-activated channel, subf NG 002680 Homo sapiens survival motor neuron pseudogene (SMNP) on chromosome § Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (without NG 002681 Homo sapiens MAPRE1P pseudogene (MAPRE1P) on chromosome 8 NG 002682 NG 002683 Homo sapiens steroid-5-beta-reductase, beta polypeptide pseudogene 1 (SF NG 002684 Homo sapiens mitochondrial translational initiation factor 2 pseudogene 1 (M NG\_002685 Homo sapiens histone 1, H2a, pseudogene 2 (HIST1H2APS2) on chromosoi Homo sapiens suppressor of cytokine signaling 2 pseudogene 2 (SOCS2P2) NG 002687 NG\_002688 Homo sapiens keratin associated protein 19 pseudogene 1 (KRTAP19P1) or NG 002689 Homo sapiens keratin associated protein 19 pseudogene 2 (KRTAP19P2) or NG\_002690 Homo sapiens Prader-Willi/Angelman syndrome region (PWSAS@) on chror Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, ep NG\_002691 NG\_002692 Homo sapiens protein phosphatase 1A pseudogene (LOC137012) on chrom-NG\_002693 Homo sapiens phosphoribosyl pyrophosphate amidotransferase pseudogene NG 002694 Homo sapiens mesoderm specific transcript homolog (mouse) pseudogene ( NG 002696 Homo sapiens eukaryotic translation initiation factor 2, subunit 2 beta, pseud Homo sapiens ALEX2 oseudogene (LOC347674) on chromosome 7 NG 002697 NG 002698 Homo sapiens eukaryotic translation initiation factor 2 beta-like pseudogene NG 002699 Homo sapiens G protein gamma 5-like subunit (GNG5ps) pseudogene on ch NG\_002700 Homo sapiens endothelin converting enzyme-like 1, pseudogene 1 (ECEL1P NG 002701 Homo sapiens ECEL2 pseudogene 2 (ECEL2) on chromosome 2 NG 002702 Homo saplens caldizzarin-like (LOC347701) pseudogene on chromosome 7 NG\_002703 Homo sapiens mitochondrial ribosomal protein S36 pseudogene (MRPS36Pe NG\_002705 Homo saplens mitochondrial ribosomal protein S36 pseudogene (MRPS36Ps NG 002707 Homo sapiens mitochondrial ribosomal protein S36 pseudogene (MRPS36PS NG 002709 Homo sapiens mitochondrial ribosomal protein S36 pseudogene (MRPS36P Homo sapiens mitochondrial ribosomal protein S36 pseudogene (MRPS36P) NG 002711 NG 002713 Homo sapiens mitochondrial ribosomal protein S36 pseudogene (MRPS36Pt NG 002716 Homo sapiens calmodulin 2 pseudogene 1 (CALM2P1) on chromosome 17 NG 002717 Homo sapiens nitric oxide synthase 2A pseudogene (LOC284193) on chrom-NG 002718 Homo sapiens galectin-9 pseudogene (LOC284194) on chromosome 17 NG\_002719 Homo sapiens TL132 pseudogene (LOC347716) on chromosome 17 NG\_002720 Homo sapiens signal recognition particle 68kD pseudogene (LOC347717) or NG\_002721 Homo sapiens karyopherin (importin) beta 2 pseudogene (LOC347719) on cl NG\_002723 Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, NG\_002724 Homo sapiens actin, beta pseudogene 7 (ACTBP7) on chromosome 15 NG\_002725 Homo sapiens eukaryotic translation initiation factor 5A pseudogene 3 (EIF5) NG 002726 Homo sapiens SRY (sex determining region Y)-box 5 pseudogene (SOX5P) NG 002727 Homo sapiens MHC class I polypeptide-related sequence C (MICC) pseudog NG 002728 Homo sapiens heterogeneous nuclear ribonucleoprotein A1 pseudogene (hn NG 002729 Homo sapiens HLA-75 pseudogene (HLA-75) on chromosome 6 NG 002731 Homo sapiens HLA-90 pseudogene (HLA-90) on chromosome 6

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NG 002733 Homo sapiens MHC class I polypeptide-related sequence G pseudogene (MI NG 002735 Homo sapiens 3.8-1.5 pseudogene (3.8-1.5) on chromosome 6 NG 002736 Homo sapiens HLA complex P5 pseudogene 12 (HCP5P12) on chromosome NG 002737 Homo sapiens HLA complex group 2 pseudogene 8 (HCG2P8) on chromoso NG 002738 Homo sapiens ribosomal protein L7a pseudogene 7 (RPL7AP7) on chromosi NG 002739 Homo sapiens HLA complex group 4 pseudogene 9 (HCG4P9) on chromoso NG 002740 Homo sapiens HLA complex P5 pseudogene 13 (HCP5P13) on chromosome NG 002741 Homo sapiens HLA complex group 4 pseudogene 10 (HCG4P10) on chromo NG 002742 Homo sapiens HLA complex P5 pseudogene 14 (HCP5P14) on chromosome NG 002743 Homo sapiens HLA complex group 9 pseudogene 5 (HCG9P5) on chromoso NG 002744 Homo sapiens HLA complex group 4 pseudogene 11 (HCG4P11) on chromo NG 002745 Homo sapiens HLA complex P5 pseudogene 15 (HCP5P15) on chromosome NG 002746 Homo saniens eukaryotic translation initiation factor 5A pseudogene 2 (EIF5) NG 002747 Homo sapiens hydroxysteroid (17-beta) dehydrogenase pseudogene 1 (HSD NG 002748 Homo saniens interleukin 6 signal transducer (gp130, oncostatin M receptor) NG 002749 Homo sapiens RAN, member RAS oncogene family pseudogene 1 (RANP1) NG 002750 Homo sapiens SMT3 suppressor of mif two 3 homolog 2 (yeast) pseudogene NG 002752 Homo sapiens NOD24 pseudogene (NOD24) on chromosome X NG 002753 Homo sapiens NOD13 pseudogene (NOD13) on chromosome X NG 002754 Homo sapiens NOD25 pseudogene (NOD25) on chromosome 12 NG 002761 Homo sapiens complement component 4 blnding protein, alpha-like 2 (C4BP NG 002762 Homo sapiens crystallin, gamma E pseudogene 1 (CRYGEP1) on chromosoi NG 002763 Homo sapiens glutamate dehydrogenase pseudogene 3 (GLUDP3) on chron NG 002764 Homo sapiens interleukin 9 receptor pseudogene 4 (IL9RP4) on chromosom NG 002765 Homo sapiens prothymosin, alpha pseudogene 2 (gene sequence 32) (PTM/ NG 002766 Homo sapiens cytochrome P450, subfamily 51 pseudogene 2 (CYP51P2) on NG 002767 Homo sapiens glycoprotein, alpha-galactosyltransferase 1 pseudogene (GG NG\_002768 Homo saplens beta-lactoglobulin pseudogene (LOC138159) on chromosome NG\_002769 Homo saplens heat shock 70kDa protein 8 pseudogene (LOC158714) on chi NG 002770 Homo sapiens pseudogene of IGF-II mRNA-binding protein 3 (LOC346296) ( NG\_002771 Homo saplens major histocompatibility complex, class I, L (HLA-L) pseudoge NG 002772 Homo saplens CAP, adenylate cyclase-associated protein, 2 (yeast) pseudos NG\_002773 Homo sapiens coactosin-like 1 (Dictyostelium) pseudogene 2 (COTL1P2) on NG 002775 Homo sapiens keratin pseudogene (LOC147228) on chromosome 17 NG 002776 Homo sapiens keratin pseudogene (LOC284196) on chromosome 17 NG 002777 Homo sapiens keratin pseudogene (LOC339186) on chromosome 17 NG 002778 Homo sapiens keratin pseudogene (LOC339241) on chromosome 17 NG 002779 Homo saniens keratin pseudogene (LOC339244) on chromosome 17 NG 002780 Homo sapiens keratin pseudogene (LOC339258) on chromosome 17 NG 002781 Homo saplens keratin pseudogene (LOC353194) on chromosome 17 NG 002782 Homo sapiens keratin pseudogene (LOC353196) on chromosome 17 NG 002785 Homo sapiens interleukin 6 receptor pseudogene (LOC157916) on chromoso NG 002786 Homo sapiens makorin, ring finger protein, pseudogene 2 (MKRNP2) on chro NG 002787 Homo sapiens chromosome 20 open reading frame 189 (C20orf189) pseudo NG 002788 Homo sapiens bitter taste receptor pseudogene 8 (PS8) on chromosome 12 NG 002790 Homo sapiens pseudogene of origin recognition complex, subunit 1-like (LOC NG 002791 Homo sapiens selenoprotein W. 1 pseudogene (SEPW1P) on chromosome NG 002792 Homo sapiens PC4 and SFRS1 interacting protein 1 pseudogene (PSIP1P) ( NG\_002793 Homo sapiens pelota/integrin, alpha 1 region (PELO/ITGA1@) on chromosoi NG 002795 Homo sapiens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002796 Homo saplens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002797 Homo sapiens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002798 Homo sapiens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002799 Homo sapiens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002800 Homo sapiens polycystic kidney disease 1 (autosomal dominant) pseudogen NG 002801 Homo sapiens 18S ribosomal RNA pseudogene (LOC359724) on chromosor NG 002802 Homo sapiens ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase

WC05944981 [lile:///E:/WC05944981.qpc]

NG 002803 Homo sapiens apical protein-like (Xenopus laevis) pseudogene (APXLP) on NG\_002804 Homo sapiens arylsulfatase F pseudogene (ARSFP) NG 002805 Homo sapiens calcium/calmodulin-dependent serine protein kinase (MAGUK NG 002806 Homo sapiens adlican pseudogene (ADLICANP) on chromosome Y NG 002807 Homo sapiens cofactor required for Sp1 transcriptional activation, subunit 2, NG\_002808 Homo sapiens C-terminal binding protein 2 pseudogene (LOC352905) on ch NG\_002809 Homo sapiens eukaryotic translation initiation factor 4A, isoform 1 pseudogei NG\_002810 Homo sapiens hypothetical protein FLJ10842 pseudogene (LOC359793) on NG\_002811 Homo sapiens glycogenin 2 pseudogene (GYG2P) on chromosome Y NG\_002812 Homo sapiens lung cancer candidate FUS1 pseudogene (LOC359794) on ch NG\_002813 Homo sapiens neurofilament, light polypeptide 68kDa pseudogene (LOC359 NG 002814 Homo sapiens G protein-coupled receptor 143 pseudogene (GPR143P) on c NG 002815 Homo sapiens 60S ribosomal protein L26 pseudogene (LOC347593) on chrc NG 002816 Homo sapiens splicing factor proline/glutamine rich (polypyrimidine tract binc NG\_002817 Homo sapiens solute carrier family 25 (mitochondrial carrier; omithine transp NG\_002818 Homo sapiens Smcy homolog, Y chromosome (mouse) pseudogene (SMCYI NG\_002819 Homo sapiens transducin (beta)-like 1Y-linked pseudogene (TBL1YP) on chr NG\_002821 Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 pseudogene (LOC: NG\_002822 Homo sapiens ubiquitin specific protease 12 pseudogene 1 (USP12P1) on ci NG\_002823 Homo sapiens ubiquitin specific protease 12 pseudogene 2 (USP12P2) on cl NG\_002824 Homo saplens ubiquitin specific protease 12 pseudogene 3 (USP12P3) on cl NG\_002825 Homo sapiens voltage-dependent anion channel 1 pseudogene (LOC359800 NG\_002826 Homo sapiens Ras-homolog enriched in brain pseudogene 1 (RHEBP1) on c NG 002827 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 1 (MRP63P1) NG 002828 Homo sapiens mitochondrial ribosomal protein S5 pseudogene (LOC133332 NG 002829 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 6 (MRP63P6) NG 002830 Homo sapiens mitochondrial ribosomal protein S33 pseudogene 1 (MRPS33 NG 002831 Homo sapiens mitochondrial ribosomal protein L36 pseudogene 1 (MRPL36) NG 002832 Homo sapiens mitochondrial ribosomal protein S35 pseudogene 1 (MRPS35 NG\_002833 Homo sapiens mitochondrial ribosomal protein S7 pseudogene 2 (MRPS7P2 NG 002834 Homo sapiens mitochondrial ribosomal protein L51 pseudogene 2 (MRPL51) NG 002835 Homo sapiens mitochondrial ribosomal protein S18C pseudogene 6 (MRPS1 NG 002836 Homo sapiens mitochondriai ribosomal protein L49 pseudogene 2 (MRPL49) NG 002837 Homo sapiens mitochondriai ribosomal protein 63 pseudogene 10 (MRP63P NG 002838 Homo saplens mitochondrial ribosomal protein L2 pseudogene 1 (MRPL2P1) NG\_002839 Homo sapiens mitochondrial ribosomal protein S18C pseudogene 4 (MRPS1 NG\_002840 Homo sapiens mitochondriai ribosomal protein S21 pseudogene 8 (MRPS21 NG\_002841 Homo saplens mitochondrial ribosomal protein L50 pseudogene 1 (MRPL50) NG\_002842 Homo sapiens mitochondrial ribosomal protein S31 pseudogene 1 (MRPS31 NG 002843 Homo saplens mitochondrial ribosomal protein L51 pseudogene 1 (MRPL51) NG\_002844 Homo sapiens mitochondrial ribosomal protein S23 pseudogene 1 (MRPS23 NG\_002845 Homo saplens mitochondrial ribosomal protein 63 pseudogene 2 (MRP63P2 NG\_002846 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 3 (MRP63P3 NG 002847 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 7 (MRP63P7 NG 002848 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 8 (MRP63P8 NG\_002849 Homo sapiens mitochondrial ribosomal protein 63 pseudogene 9 (MRP63P9) NG 002850 Homo sapiens mitochondrial ribosomal protein L11 pseudogene 3 (MRPL11) NG\_002851 Homo sapiens mitochondrial ribosomal protein L14 pseudogene 1 (MRPL14) NG 002852 Homo sapiens mitochondrial ribosomal protein L15 pseudogene 1 (MRPL15i NG\_002853 Homo sapiens mitochondrial ribosomal protein L20 pseudogene 1 (MRPL20) NG\_002854 Homo sapiens mitochondrial ribosomal protein L22 pseudogene 1 (MRPL22) NG\_002855 Homo sapiens mitochondrial ribosomal protein L3 pseudogene 1 (MRPL3P1) NG\_002856 Homo sapiens mitochondrial ribosomal protein L30 pseudogene 1 (MRPL30) NG 002857 Homo saplens mitochondnal ribosomal protein L32 pseudogene 1 (MRPL32) NG 002858 Homo sapiens mitochondrial ribosomal protein L35 pseudogene 1 (MRPL35) NG 002859 Homo sapiens mitochondrial ribosomal protein L35 pseudogene 2 (MRPL35) NG 002860 Homo sapiens mitochondrial ribosomal protein L35 pseudogene 3 (MRPL35)

Homo sapiens mitochondrial ribosomal protein L35 pseudogene 4 (MRPL35) NG 002861 NG 002862 Homo sapiens mitochondrial ribosomal protein L42 pseudogene 3 (MRPL42) Homo sapiens mitochondrial ribosomal protein L45 pseudogene 1 (MRPL45) NG 002863 Homo sapiens mitochondrial ribosomal protein L49 pseudogene 1 (MRPL49) NG 002864 Homo sapiens mitochondrial ribosomal protein L50 pseudogene 2 (MRPL50) NG 002865 Homo sapiens mitochondrial ribosomal protein L50 pseudogene 3 (MRPL50) NG 002866 NG 002867 Homo sapiens mitochondrial ribosomal protein L50 pseudogene 4 (MRPL50) NG 002868 Homo sapiens mitochondrial ribosomal protein L53 pseudogene 1 (MRPL53) NG 002869 Homo sapiens mitochondrial ribosomal protein S10 pseudogene 1 (MRPS10 NG 002870 Homo sapiens mitochondrial ribosomal protein S10 pseudogene 5 (MRPS10 NG 002871 Homo sapiens mitochondrial ribosomal protein S15 pseudogene 1 (MRPS15 NG 002872 Homo sapiens mitochondrial ribosomal protein S15 pseudogene 2 (MRPS15 NG\_002873 Homo sapiens mitochondrial ribosomal protein S17 pseudogene 3 (MRPS17 NG\_002874 Homo sapiens mitochondrial ribosomal protein S17 pseudogene 5 (MRPS17 NG 002875 Homo sapiens mitochondrial ribosomal protein S17 pseudogene 6 (MRPS17 NG 002876 Homo sapiens mitochondrial ribosomal protein S17 pseudogene 9 (MRPS17 Homo sapiens mitochondrial ribosomal protein S18A pseudogene 1 (MRPS1 NG 002877 NG 002878 Homo sapiens mitochondrial ribosomal protein S18B pseudogene 1 (MRPS1 NG 002879 Homo sapiens mitochondrial ribosomal protein S18B pseudogene 2 (MRPS1 NG 002880 Homo sapiens mitochondrial ribosomal protein S18C pseudogene 3 (MRPS1 NG\_002881 Homo sapiens mitochondrial ribosomal protein S18C pseudogene 5 (MRPS1 Homo saniens mitochondrial ribosomal protein S21 pseudogene 2 (MRPS21 NG 002882 NG 002883 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 3 (MRPS21 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 4 (MRPS21 NG 002884 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 5 (MRPS21 NG 002885 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 6 (MRPS21 NG 002886 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 7 (MRPS21 NG 002887 NG 002888 Homo sapiens mitochondrial ribosomal protein S21 pseudogene 9 (MRPS21 NG 002889 Homo sapiens mitochondrial ribosomal protein S22 pseudogene 1 (MRPS22 Homo sanlens mitochondrial ribosomal protein S29 pseudogene 2 (MRPS29 NG 002890 Homo saniens mitochondrial ribosomal protein S33 pseudogene 2 (MRPS33 NG 002891 NG 002892 Homo saplens mitochondrial ribosomal protein S33 pseudogene 3 (MRPS33 NG 002893 Homo sapiens mitochondrial ribosomal protein S33 pseudogene 4 (MRPS33 NG 002894 Homo saplens mitochondrial ribosomal protein S35 pseudogene 2 (MRPS35 NG\_002895 Homo sapiens mitochondrial ribosomal protein S35 pseudogene 3 (MRPS35 NG\_002896 Homo sapiens mitochondrial ribosomal protein S6 pseudogene 1 (MRPS6P1 NG\_002897 Homo saplens mitochondrial ribosomal protein S6 pseudogene 2 (MRPS6P2 NG\_002898 Homo saplens mitochondrial ribosomal protein S6 pseudogene 4 (MRPS6P4 NG 002899 Homo saplens mitochondrial ribosomal protein S7 pseudogene 1 (MRPS7P1 NG 002900 Homo sapiens mitochondrial ribosomal protein S5 pseudogene (MRPS5P4) NG 002901 Homo saplens PCNA pseudogene pF2PCNA (LOC359805) on chromosome NG 002902 Homo saplens PCNA pseudogene p1PCNA (LOC359806) on chromosome 4 NG 002903 Homo saplens mitochondrial ribosomal protein S10 pseudogene (MRPS10P) NG 002904 Homo sapiens mitochondrial ribosomal protein S29 pseudogene 1 (MRPS29 NG 002905 Homo saplens chloride channel, nucleotide-sensitive, 1B (CLNS1B) pseudog NG\_002906 Homo sapiens VENT-like homeobox 2 pseudogene 4 (VENTX2P4) on chrom Homo sapiens mitochondrial ribosomal protein L42 pseudogene 2 (MRPL42) NG 002907 Homo sapiens mitochondrial ribosomal protein L42 pseudogene 4 (MRPL42) NG 002908 Homo sapiens VENT-like homeobox 2 pseudogene 2 (VENTX2P2) on chrom NG 002909 Homo sapiens mitochondrial ribosomal protein L10 pseudogene (LOC34895) NG 002910 Homo sapiens VENT-like homeobox 2 pseudogene 3 (VENTX2P3) on chrom NG 002911 Homo sapiens mitochondrial ribosomal protein L30 pseudogene 2 (MRPL30) NG 002912 Homo sapiens mitochondrial ribosomal protein L39 pseudogene (LOC35981) NG 002913 NG 002914 Homo sapiens mitochondrial ribosomal protein L42 pseudogene 5 (MRPL42) NG 002915 Homo sapiens peroxiredoxin 2 pseudogene 1 (PRDX2P1) on chromosome 1 NG 002916 Homo sapiens MHC class I polypeptide-related sequence E (MICE) pseudog NG 002917 Homo sapiens PAI-1 mRNA-binding protein pseudogene (LOC359996) on ch

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NG 002918 Homo sapiens ATP synthase, H+ transporting, mitochondrial F0 complex, su
 NG 002919
             Homo sapiens CHRNA7 (cholinergic receptor, nicotinic, alpha polypeptide 7,
 NG 002920
             Homo sapiens CHRNA7 (cholinergic receptor, nicotinic, alpha polypeptide 7,
 NG 002921
             Homo sapiens BCL6 co-repressor pseudogene (LOC360000) on chromosom
 NG 002922
             Homo sapiens interferon alpha-L pseudogene (G13P1) on chromosome 9
             Homo sapiens glyceraldehyde-3-phosphate dehydrogenase pseudogene (LC
 NG 002923
 NG 002924
             Homo sapiens glyceraldehyde-3-phosphate dehydrogenase pseudogene (LC
 NG 002926
             Homo sapiens cytochrome c, somatic pseudogene (HCP46) on chromosome
 NG 002927
             Homo sapiens cytochrome c, somatic pseudogene (LOC360009) on chromos
 NG_002928 Homo sapiens RAD17 homolog (S. pombe) pseudogene 2 (RAD17P2) on ch
NG_002929 Homo sapiens RAD17 homolog (S. pombe) pseudogene 1 (RAD17P1) on ch
 NG 002930 Homo sapiens TAF9 pseudogene 1 (TAF9P1) on chromosome Y
 NG 002931 Homo sapiens TAF9 pseudogene 2 (TAF9P2) on chromosome Y
 NG 002932 Homo sapiens discs, large homolog 7 (Drosophila) pseudogene (LOC360014
 NG 002933 Homo sapiens raft-linking protein pseudogene (LOC360015) on chromosome
 NG 002934 Homo sapiens capicua homolog (Drosophila) pseudogene (LOC360016) on
NG 002935 Homo sapiens capicua homolog (Drosophila) pseudogene (LOC360017) on
NG_002936 Homo sapiens HBxAg transactivated protein 2 pseudogene (LOC360018) on
 NG 002937
             Homo sapiens keratin 18 pseudogene 10 (KRT18P10) on chromosome Y
NG 002938
             Homo sapiens PC4 and SFRS1 interacting protein 2 pseudogene (LOC3600
NG_002939 Homo saplens protein phosphatase 1, regulatory (Inhibitor) subunit 12B pseu
NG_002940 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 12B (LOC
NG_002941 Homo sapiens ribosomal protein L41 pseudogene (LOC286568) on chromos
NG_002942 Homo sapiens ribosomal protein L41 pseudogene (LOC286570) on chromos
NG_002943 Homo saplens intersectin 2 pseudogene (LOC360027) on chromosome Y
NG 002944 Homo sapiens intersectin 2 pseudogene (LOC360026) on chromosome Y
NG 002945 Homo sapiens intersectin 2 pseudogene (LOC360025) on chromosome Y
NG 002946 Homo sapíens intersectin 2 pseudogene (LOC360024) on chromosome Y
NG 002947
            Homo sapiens tubulin, beta polypeptide 4, member Q pseudogene (LOC140)
NG 002948
            Homo sapiens tubulin, beta polypeptide 4, member Q pseudogene (LOC349-
NG 002949
            Homo sapiens hypothetical protein MGC23909 pseudogene (LOC360028) or
NG 002950
            Homo sapiens hypothetical protein MGC45134 (MGC45134) pseudogene on
NG_002951
            Homo sapiens cyclic-AMP-dependent transcription factor ATF-4 pseudogene
NG_002952
            Homo sapiens hypothetical protein BC016683 pseudogene (LOC360029) on
NG 002953
            Homo sapiens cytochrome c, somatic pseudogene (HCP1) on chromosome
NG 002954
            Homo sapiens cytochrome c, somatic pseudogene (HCP3) on chromosome
NG_002955 Homo sapiens cytochrome c, somatic pseudogene (HCP4) on chromosome
NG 002956 Homo sapiens cytochrome c, somatic pseudogene (HCP5) on chromosome
NG_002957 Homo saplens cytochrome c, somatic pseudogene (HCP6) on chromosome :
NG_002958 Homo sapiens cytochrome c, somatic pseudogene (HCP7) on chromosome :
NG_002959 Homo saplens cytochrome c, somatic pseudogene (HCP8) on chromosome:
NG_002960 Homo saplens cytochrome c, somatic pseudogene (HCP9) on chromosome :
NG_002961 Homo sapiens cytochrome c, somatic pseudogene (HCP10) on chromosome
NG_002962 Homo sapiens cytochrome c, somatic pseudogene (HCP11) on chromosome
NG_002963 Homo saplens cytochrome c, somatic pseudogene (HCP12) on chromosome
NG_002964 Homo sapiens cytochrome c, somatic pseudogene (HCP13) on chromosome
NG 002965 Homo sapiens cytochrome c, somatic pseudogene (HCP14) on chromosome
NG 002966 Homo sapiens cytochrome c, somatic pseudogene (HCP16) on chromosome
NG 002967 Homo sapiens cytochrome c, somatic pseudogene (HCP17) on chromosome
NG_002968 Homo sapiens cytochrome c, somatic pseudogene (HCP18) on chromosome
NG 002969 Homo sapiens cytochrome c, somatic pseudogene (HCP19) on chromosome
NG_002970 Homo sapiens cytochrome c, somatic pseudogene (HCP20) on chromosome
NG_002971 Homo sapiens cytochrome c, somatic pseudogene (HCP21) on chromosome
NG_002972 Homo sapiens cytochrome c, somatic pseudogene (HCP22) on chromosome
NG_002973 Homo sapiens cytochrome c, somatic pseudogene (HCP23) on chromosome
NG_002974 Homo sapiens cytochrome c, somatic pseudogene (HCP24) on chromosome
NG 002975 Homo sapiens cytochrome c, somatic pseudogene (HCP25) on chromosome
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NG_002976 Homo sapiens cytochrome c, somatic pseudogene (HCP26) on chromosome
 NG 002977
              Homo sapiens cytochrome c, somatic pseudogene (HCP27) on chromosome
 NG 002978
             Homo sapiens cytochrome c, somatic pseudogene (HCP28) on chromosome
 NG_002979 Homo sapiens cytochrome c, somatic pseudogene (HCP29) on chromosome
 NG_002980 Homo sapiens cytochrome c, somatic pseudogene (HCP30) on chromosome
 NG 002981 Homo sapiens cytochrome c, somatic pseudogene (HCP32) on chromosome
 NG_002982 Homo sapiens cytochrome c, somatic pseudogene (HCP33) on chromosome
 NG 002983 Homo sapiens cytochrome c, somatic pseudogene (HCP34) on chromosome
 NG 002984 Homo sapiens cytochrome c, somatic pseudogene (HCP35) on chromosome
 NG_002985 Homo sapiens cytochrome c, somatic pseudogene 1 (CYCSP1) on chromoso
 NG 002986 Homo sapiens cytochrome c, somatic pseudogene (HCP37) on chromosome
 NG_002987 Homo sapiens cytochrome c, somatic pseudogene (HCP38) on chromosome
 NG_002988 Homo sapiens cytochrome c, somatic pseudogene (HCP39) on chromosome
 NG_002989 Homo sapiens cytochrome c, somatic pseudogene (HCP40) on chromosome
 NG_002990 Homo sapiens cytochrome c, somatic pseudogene (HCP41) on chromosome
NG_002991 Homo sapiens cytochrome c, somatic pseudogene (HCP42) on chromosome
NG_002992 Homo sapiens cytochrome c, somatic pseudogene (HCP43) on chromosome
NG_002993 Homo sapiens cytochrome c, somatic pseudogene (HCP44) on chromosome
NG 002994 Homo sapiens cytochrome c, somatic pseudogene (HCP45) on chromosome
NG 002995 Homo sapiens cytochrome c, somatic pseudogene (HCP48) on chromosome
NG 002996 Homo sapiens thymosin-like 5 (TMSL5) pseudogene on chromosome 11
NG 002997 Homo sapiens thymosin-like 7 (TMSL7) pseudogene on chromosome X
NG 002998 Homo sapiens NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4, 9
NG_002999 Homo sapiens cytochrome c, somatic pseudogene (HCP49) on chromosome
NG_003006 Homo sapiens RNA blinding motif protein, Y-linked, family 1, member H (RBI)
NG_003008 Homo saplens nuclease sensitive element binding protein 1 pseudogene (bA
NG_003009 Homo sapiens argininosuccinate synthetase pseudogene 8 (ASSP8) on chro
NG_003010 Homo sapiens cytochrome c oxidase subunit Vb-like 1 (COX5BL1) pseudoge
NG 003011
             Homo sapiens glyceraldehyde-3-phosphate dehydrogenase-like 4 (GAPDL4)
NG_003012 Homo sapiens glydne dehydrogenase (decarboxylase) pseudogene (GLDCF
NG 003013 Homo saplens general transcription factor IIF, polypeptide 2-like (GTF2F2L)
NG_003014 Homo sapiens heat shock 90kDa protein 1, alpha-like 2 (HSPCAL2) pseudoc
NG_003015 Homo sapiens heat shock 90kDa protein 1, beta pseudogene 1 (HSPCP1) or
NG_003016 Homo saplens lactate dehydrogenase A-like 1 (LDHAL1) pseudogene on chr
NG_003017 Homo sapiens sorcin-like (SRIL) pseudogene on chromosome 4
NG_003018 Homo sapiens v-raf-1 murine leukemia viral oncogene homolog 1 pseudoger
NG_003019 Homo sapiens actin, beta pseudogene 2 (ACTBP2) on chromosome 5
NG_003020 Homo saplens actin, beta pseudogene 4 (ACTBP4) on chromosome 5
NG_003021 Homo sapiens argininosuccinate synthetase pseudogene 10 (ASSP10) on cl
NG_003022 Homo sapiens argininosuccinate synthetase pseudogene 9 (ASSP9) on chro
NG 003023 Homo sapiens OFD1 pseudogene 1 (OFD1P1) on chromosome 5
NG 003024 Homo saplens diazepam binding inhibitor-like 1 (DBIL1) pseudogene on chrc
NG 003025 Homo sapiens chemokine ligand 14, chemokine ligand 15 transcription unit (
NG_003026 Homo saplens endogenous retroviral pol gene-like sequence 2 (ERPL2) psei
NG_003027 Homo sapiens glyceraldehyde-3-phosphate dehydrogenase-like 16 (GAPDL
NG_003028 Homo sapiens ferritin, heavy polypeptide-like 10 (FTHL10) pseudogene on c
NG_003029 Homo sapiens gap junction protein, alpha 1, 43kDa (connexin 43) pseudoger
NG_003030 Homo sapiens glutamate-ammonia ligase (glutamine synthase)-like 1 (GLUL
NG_003031 Homo sapiens hypoxanthine phosphoribosyltransferase pseudogene 2 (HPR
NG_003032 Homo sapiens moesin-like 1 (MSNL1) pseudogene on chromosome 5
NG 003033 Homo sapiens ribosomal protein S17 pseudogene 2 (RPS17P2) on chromos
NG 003034 Homo sapiens ribosomal protein S20 pseudogene 3 (RPS20P3) on chromos
NG 003035 Homo sapiens ribosomal protein S20 pseudogene 4 (RPS20P4) on chromos
NG_003036 Homo sapiens t-complex 1-like 2 (TCP1L2) pseudogene on chromosome 5
NG_003037 Homo sapiens X-box binding protein pseudogene 1 (XBPP1) on chromosomic
NG_003038 Homo sapiens eukaryotic translation elongation factor 1 beta 3 (EEF1B3) psr
NG_003039 Homo sapiens actin, gamma pseudogene 10 (ACTGP10) on chromosome X
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NG 003040 Homo sapiens brain cytoplasmic RNA 1, pseudogene 1 (BCYRN1P1) on chr. NG 003041 Homo sapiens RNA binding motif protein, Y-linked, family 2, member B pseu Homo sapiens RNA binding motif protein, Y-linked, family 2, member C pseu NG 003042 Homo sapiens RNA binding motif protein, Y-linked, family 2, member D pseu NG 003043 NG 003044 Homo sapiens centromere protein C2, 140kDa (CENPC2) pseudogene on ch NG 003045 Homo sapiens eukarvotic translation elongation factor 1 beta 1 (EEF1B1) psi NG\_003061 Homo sapiens DNA segment on chromosome 6 (unique, pseudogene) 2723 NG 003062 Homo sapiens ribosomal protein L7a pseudogene 1 (RPL7AP1) on chromosomal protein L7a pseudogene 2 (RPL7AP1) on chromosomal NG\_003063 Homo sapiens zinc finger protein 381, Y-linked pseudogene (ZNF381P) on c NG 003064 Homo sapiens RNA binding motif protein, Y-linked, family 2, member A pseu NG 003070 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC Homo sapiens MADS box transcription enhancer factor 2, polypeptide A psei NG 003072 Homo saniens protein kinase, cAMP-dependent, regulatory, type I, alpha pse NG 003073 NG\_003074 Homo saniens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003075 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG\_003076 Homo sapiens ring finger protein 134 pseudogene 1 (RNF134P1) on chromo NG\_003077 Homo sapiens testis specific protein, Y-linked pseudogene 1 (TSPYP1) on d NG 003078 Homo sapiens testis specific protein, Y-linked pseudogene 2 (TSPYP2) on cl NG 003079 Homo saplens testis specific protein, Y-linked pseudogene 3 (TSPYP3) on cl Homo sapiens testis specific protein, Y-linked pseudogene 4 (TSPYP4) on cl NG 003080 NG 003081 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003082 NG 003083 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003084 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003085 NG 003086 Homo saniens RNA blnding motif protein, Y-linked, family 2, pseudogene (LC NG 003087 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003088 Homo saplens RNA binding motif protein, Y-linked, family 2, pseudogene (LC Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003089 NG 003090 Homo saplens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003091 Homo sapiens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003092 Homo saplens RNA binding motif protein, Y-linked, family 2, pseudogene (LC NG 003093 Homo sapiens testis specific protein, Y-linked pseudogene 5 (TSPYP5) on cl NG 003094 Homo sapiens X Kell blood group precursor-related, Y-linked pseudogene 1 NG 003095 Homo saplens X Kell blood group precursor-related, Y-linked pseudogene 2 NG 003096 Homo saplens X Kell blood group precursor-related, Y-linked pseudogene 3 NG\_003097 Homo saplens X Kell blood group precursor-related, Y-linked pseudogene 4 Homo saplens X Kell blood group precursor-related, Y-linked pseudogene 5 NG 003098 NG 003099 Homo sapiens X Kell blood group precursor-related, Y-linked pseudogene (X NG 003100 Homo sapiens choline kinase-like, camitine palmitoyitransferase 1B (muscle) NG 003101 Homo sapiens ublguitin-conjugating enzyme E2L 1 (UBE2L1) pseudogene o NG 003102 Homo sapiens COP9 constitutive photomorphogenic homolog subunit 5 pseu NG 003103 Homo sapiens COP9 pseudogene (LOC375350) on chromosome 3 NG 003104 Homo sapiens zinc finger protein 91 homolog (mouse), ciliary neurotrophic fa Homo sapiens E2F transcription factor 6 pseudogene (LOC376818) on chror NG 003105 Homo saplens E2F transcription factor 6 pseudogene (LOC386610) on chror NG 003106 Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleo NG 003107 Homo sapiens similar to v-raf murine sarcoma viral oncogene homolog B1 ps NG 003108 NG 003109 Homo sapiens osteoclast stimulating factor 1 pseudogene (OSTF1P) on chro NG 003110 Homo sapiens LAG1 longevity assurance homolog 1 (S. cerevisiae), growth NG 003111 Homo sapiens serine/threonine kinase 6-like pseudogene (STK6LP) on chro NG 003114 Homo sapiens OFD1 pseudogene Y-linked 1 (OFDYP1) on chromosome Y NG\_003115 Homo sapiens OFD1 pseudogene Y-linked 2 (OFDYP2) on chromosome Y NG 003116 Homo sapiens OFD1 pseudogene Y-linked 3 (OFDYP3) on chromosome Y NG 003117 Homo sapiens OFD1 pseudogene Y-linked 4 (OFDYP4) on chromosome Y NG 003118 Home sapiens OFD1 pseudogene Y-linked 5 (OFDYP5) on chromosome Y NG 003119 Homo sapiens OFD1 pseudogene Y-linked 6 (OFDYP6) on chromosome Y

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NG 003120 Homo sapiens OFD1 pseudogene Y-linked 7 (OFDYP7) on chromosome Y
NG 003121 Homo sapiens OFD1 pseudogene Y-linked 8 (OFDYP8) on chromosome Y
NG 003122 Home sapiens OFD1 pseudogene Y-linked 9 (OFDYP9) on chromosome Y
NG 003125 Homo sapiens OFD1 pseudogene Y-linked 11 (OFDYP11) on chromosome \
NG 003126 Home sapiens OFD1 pseudogene Y-linked 12 (OFDYP12) on chromosome \
                  Homo sapiens OFD1 pseudogene Y-linked 13 (OFDYP13) on chromosome '
NG 003127
NG_003128 Homo sapiens OFD1 pseudogene Y-linked 14 (OFDYP14) on chromosome Y
NG 003129 Homo sapiens OFD1 pseudogene Y-linked 15 (OFDYP15) on chromosome Y
NG 003130 Homo sapiens chromodomain protein, Y-linked 10 pseudogene (CDY10P) or
NG 003131
                  Homo sapiens chromodomain protein, Y-linked 3 pseudogene (CDY3P) on c
NG 003132 Homo sapiens chromodomain protein, Y-linked 5 pseudogene (CDY5P) on c
                  Homo saniens chromodomain protein, Y-linked 9 pseudogene (CDY9P) on c
NG 003133
NG 003134
                  Homo sapiens family with sequence similarity 8, member A7 pseudogene (F)
NG 003135
                  Homo sapiens family with sequence similarity 8, member A8 pseudogene (Fr
NG_003136
                  Homo sapiens family with sequence similarity 8, member A9 pseudogene (Fr
NG 003137
                  Homo sapiens family with sequence similarity 8, member A1 pseudogene (L4
NG 003138 Homo sapiens chromodomain protein, Y-linked 4 pseudogene (CDY4P) on c
NG 003139
                  Homo sapiens chromodomain protein, Y-linked 6 pseudogene (CDY6P) on c
NG 003140 Homo sapiens chromodomain protein, Y-linked 7 pseudogene (CDY7P) on c
                  Homo sapiens chromodomain protein, Y-linked 8 pseudogene (CDY8P) on c
NG 003141
NG 003142 Homo sapiens chromodomain protein, Y-linked 12 pseudogene (CDY12P) or
NG 003143
                  Homo sapiens chromodomain protein, Y-linked 13 pseudogene (CDY13P) or
                  Homo sapiens chromodomain protein, Y-linked 14 pseudogene (CDY14P) or
NG 003144
NG 003145 Homo sapiens chromodomain protein, Y-linked 15 pseudogene (CDY15P) or
NG 003146 Homo sapiens chromodomain protein, Y-linked 16 pseudogene (CDY16P) or
NG 003147 Homo sapiens chromodomain protein, Y-linked 17 pseudogene (CDY17P) or
NG 003148 Homo sapiens chromodomain protein, Y-linked 18 pseudogene (CDY18P) or
NG 003149 Homo sapiens chromodomain protein, Y-linked 19 pseudogene (CDY19P) or
NG 003150 Homo sapiens chromodomain protein, Y-linked 20 pseudogene (CDY20P) or
NG 003151
                  Homo sapiens chromodomain protein, Y-linked 21 pseudogene (CDY21P) or
NG 003152 Homo sapiens chromodomain protein, Y-linked 22 pseudogene (CDY22P) or
NG 003153 Homo sapiens chromodomain protein, Y-linked 23 pseudogene (CDY23P) or
NG 003154
                  Homo sapiens chromodomain protein, Y-linked 11 pseudogene (CDY11P) or
NG 003155 Homo sapiens ribosomal protein L29 pseudogene 1 (RPL29P1) on chromosomal pseudogene 1 (RPL29P1) 
NG 003156 Homo sapiens ribosomal protein L39 pseudogene 3 (RPL39P3) on chromosc
NG 003157
                  Homo saplens v-raf murine sarcoma 3611 viral oncogene homolog pseudoge
NG 003158
                  Homo sapiens telomeric repeat binding factor (NIMA-interacting) 1 pseudoge
NG 003159
                  Homo sapiens pseudogene of CXYorf1 (CXYorf1P) on chromosome 16
NG 003160
                  Homo sapiens ribosomal protein L24 pseudogene 4 (RPL24P4) on chromoso
NG 003162
                  Homo saplens actin, beta pseudogene 9 (ACTBP9) on chromosome 18
NG 003163
                   Homo sapiens creatine kinase B pseudogene 1 (CKBP1) on chromosome 16
NG 003164
                   Homo sapiens transferrin pseudogene (TFP) on chromosome 3
                  Homo sapiens platelet-activating factor acetylhydrolase, isoform lb, pseudog
NG 003165
NG 003166
                  Homo saplens olfactory receptor, family 7, subfamily A, member 8 pseudoge
NG 003167
                  Homo sapiens platelet-activating factor acetylhydrolase, isoform lb, pseudog
                  Homo sapiens ubiquitin specific protease 9, Y-linked pseudogene (LOC3873
NG 003168
                  Homo saplens ubiquitin specific protease 9, Y-linked pseudogene (LOC3873
NG 003169
NG 003170
                  Homo sapiens ubiquitin specific protease 9, Y-linked pseudogene (LOC3873)
NG 003171
                  Homo sapiens USP9Y pseudogene 1 (USP9YP1) on chromosome Y
NG 003172 Homo sapiens USP9Y pseudogene 2 (USP9YP2) on chromosome Y
NG 003173 Homo sapiens ubiquitin specific protease 9, Y-linked pseudogene (LOC3873
NG 003180 Homo sapiens cytochrome P450, family 2, subfamily D, polypeptide 6 genom
NG 003183 Homo sapiens BRCA1 pseudogene (LBRCA1) on chromosome 17
NG 003186 Homo sapiens transcription elongation factor A (SII), 1 pseudogene (LOC39§
NG 003187 Homo sapiens deafness dystonia pseudogene (DDPP) on chromosome 2
NG 003188 Homo sapiens chemokine (C-C motif) ligand 3-like 2 (CCL3L2) pseudogene
NG 003189 Homo sapiens ribosomal protein S26 pseudogene 6 (RPS26P6) on chromos
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NG 003190 Homo sapiens pseudogene of ribosomal protein L9 (LOC388147) on chromo NG 003193 Homo sapiens PR/SET domain containing protein 07 pseudogene (SET07p) NG 003194 Homo sapiens olfactory receptor, family 2, subfamily B, member 8 pseudoge NG 003195 Homo sapiens olfactory receptor, family 52, subfamily L, member 2 pseudogi NG 003196 Homo sapiens olfactory receptor, family 10, subfamily D, member 4 pseudog NG 003197 Homo sapiens olfactory receptor, family 52, subfamily E, member 1 pseudog NG 003198 Homo sapiens olfactory receptor, family 4, subfamily K, member 3 pseudoge NG 003200 Homo sapiens ELK2, member of ETS oncogene family, pseudogene 2 (ELK2 NG 003201 Homo sapiens offactory receptor, family 4, subfamily G, member 2 pseudoge NG 003215 Homo saplens eukaryotic translation initiation factor 2, subunit 3 gamma, 52 NG 003216 Homo sapiens ribosomal protein S25 pseudogene (LOC283114) on chromos NG 003217 Homo sapiens heat shock 60kDa protein 1 pseudogene (LOC283320) on chi NG\_003218 Homo sapiens synaptogyrin 2 pseudogene (LOC283698) on chromosome 15 NG 003219 Homo sapiens transcription elongation factor B (SIII), polypeptide 1 pseudog NG 003221 Homo sapiens olfactory receptor, family 11, subfamily I, member 1 pseudoge NG 003222 Homo sapiens olfactory receptor, family 4, subfamily G, member 3 pseudoge Homo sapiens olfactory receptor, family 5, subfamily D, member 11 pseudog NG 003230 NG 003253 Homo sapiens cytochrome c oxidase, subunit 8B pseudogene (COX8B) on c NG\_003254 Homo sapiens immunoglobulin heavy constant epsilon P2 (IGHEP2) pseudo NG\_003255 Homo sapiens Rhesus blood group cluster (RHD/RHCE@) on chromosome NG 003256 Homo sapiens gonadotropin-releasing hormone receptor 2 pseudogene (GN NG 003258 Homo sapiens folate hydrolase 2 (FOLH2) pseudogene on chromosome 11 NG\_003259 Homo sapiens ribosomal protein S9 pseudogene 1 (RPS9P1) on chromosom NG 004075 Homo sapiens laminin receptor 1 pseudogene 14 (LAMR1P14) on chromoso NG 004077 Homo sapiens thiopunne S-methyltransferase pseudogene (LOC400650) on NG 004085 Homo sapiens protein tyrosine phosphatase type IVA pseudogene 1 (PTP4A NG 004086 Homo sapiens olfactory receptor, family 5, subfamily J, member 1 pseudoger NG 004087 Homo sapiens olfactory receptor, family 7, subfamily A, member 2 pseudoge NG 004088 Homo sapiens olfactory receptor, family 2, subfamily E, member 1 pseudoge NG 004089 Home sapiens olfactory receptor, family 4, subfamily H, member 12 pseudog NG\_004091 Homo sapiens mitochondrial ribosomal protein S17 pseudogene (MRPS17P NG\_004092 Homo sapiens mitochondrial ribosomal protein S17 pseudogene (MRPS17P NG\_004093 Homo saplens Nanog homeobox pseudogene 8 (NANOGP8) on chromosom NG\_004095 Homo sapiens Nanog homeobox pseudogene 3 (NANOGP3) on chromosom NG\_004096 Homo sapiens Nanog homeobox pseudogene 10 (NANOGP10) on chromoso NG\_004097 Homo sapiens Nanog homeobox pseudogene 9 (NANOGP9) on chromosom NG 004098 Homo sapiens NANOG homeobox pseudogene 7 (NANOGP7) on chromosoi NG 004099 Homo sapiens NANOG homeobox pseudogene 2 (NANOGP2) on chromosoi NG 004100 Homo sapiens NANOG homeobox pseudogene 4 (NANOGP4) on chromosor NG 004101 Homo sapiens NANOG homeobox pseudogene 5 (NANOGP5) on chromosoi NG 004102 Homo sapiens NANOG pseudogene 6 (NANOGP6) on chromosome 10 NG\_004103 Homo sapiens NANOG homeobox pseudogene 11 (NANOGP11) on chromos NG\_004109 Homo saplens YTH domain family 2 pseudogene (YTHDF2P) on chromosom NG\_004110 Homo sapiens ribonuclease H1 pseudogene 2 (RNASEH1P2) on chromoson NG\_004111 Homo sapiens ribonuclease H1 pseudogene 1 (RNASEH1P1) on chromoson Homo sapiens endogenous retroviral family W, env(C7), member 1 (syncytin NG 004112 Homo sapiens CCL3L1-CCL4L1 chemokine gene cluster (CCL3L1-CCL4L1( NG 004113 Homo sapiens VKORC1 pseudogene 1 (LOC414355) on chromosome X NG 004115 Homo sapiens VKORC1 pseudogene 2 (LOC414357) on chromosome 1 NG 004116 Homo sapiens olfactory receptor, family 7, subfamily E, member 22 pseudog NG 004122 Homo sapiens olfactory receptor, family 7, subfamily E, member 21 pseudog NG 004123 Homo sapiens olfactory receptor, family 5, subfamily E, member 1 pseudoge NG 004124 Homo sapiens olfactory receptor, family 10, subfamily D, member 3 pseudog NG 004125 NG 004126 Homo sapiens olfactory receptor, family 10, subfamily D, member 1 pseudog NG 004127 Homo sapiens olfactory receptor, family 7, subfamily E, member 66 pseudog NG\_004128 Homo sapiens olfactory receptor, family 7, subfamily E, member 47 pseudog NG 004129 Homo sapiens olfactory receptor, family 7, subfamily E, member 36 pseudog

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NG 004130 Homo sapiens olfactory receptor, family 7, subfamily E, member 29 pseudog
NG 004131 Homo sapiens olfactory receptor, family 7, subfamily E, member 28 pseudog
NG 004132 Homo sapiens olfactory receptor, family 7, subfamily E, member 25 pseudog
NG 004133 Homo sapiens olfactory receptor, family 4, subfamily G, member 1 pseudoge
NG_004134 Homo sapiens olfactory receptor, family 4, subfamily F, member 1 pseudoge
NG_004135 Homo sapiens olfactory receptor, family 4, subfamily E, member 1 pseudoge
NG_004136 Homo sapiens olfactory receptor, family 4, subfamily B, member 2 pseudoge
             Homo sapiens olfactory receptor, family 2, subfamily V, member 1 (OR2V1) I
NG 004137
NG_004138 Homo sapiens olfactory receptor, family 1, subfamily H, member 1 pseudoge
NG_004139 Homo sapiens olfactory receptor, family 5, subfamily P, member 1 pseudoge
NG_004140 Homo sapiens olfactory receptor, family 6, subfamily M, member 3 pseudoge
NG_004141 Homo sapiens olfactory receptor, family 11, subfamily H, member 2 (OR11H.
NG 004142 Homo sapiens olfactory receptor, family 51, subfamily B, member 3 pseudog
NG_004143 Homo sapiens olfactory receptor, family 5, subfamily AL, member 2 pseudog
NG_004144 Homo sapiens olfactory receptor, family 5, subfamily AL, member 1 pseudog
NG_004145 Homo sapiens olfactory receptor, family 5, subfamily BM, member 1 pseudos
NG 004146 Homo sapiens olfactory receptor, family 8, subfamily K, member 2 pseudoge
             Homo saplens olfactory receptor, family 8, subfamily 1, member 1 pseudoger
NG 004147
             Homo sapiens olfactory receptor, family 4, subfamily G, member 4 pseudoge
NG 004148
             Homo sapiens olfactory receptor, family 5, subfamily M, member 7 pseudoge
NG 004149
             Homo saplens olfactory receptor, family 5, subfamily M, member 6 pseudoge
NG 004150
             Homo saplens olfactory receptor, family 5, subfamily M, member 5 pseudog€
NG 004151
             Homo saplens olfactory receptor, family 5, subfamily M, member 4 pseudoge
NG_004152
             Homo sapiens olfactory receptor, family 10, subfamily AB, member 1 pseudo
NG_004153
             Homo sapiens olfactory receptor, family 5, subfamily M, member 2 pseudoge
NG 004154
             Homo sapiens offactory receptor, family 6, subfamily M, member 2 pseudog€
NG_004155
             Homo sapiens olfactory receptor, family 5, subfamily BJ, member 1 pseudog
NG_004156
             Homo sapiens olfactory receptor, family 5, subfamily BH, member 1 pseudoc
NG_004157
             Homo sapiens olfactory receptor, family 5, subfamily AW, member 1 pseudo
NG 004158
             Homo sapiens olfactory receptor, family 4, subfamily W, member 1 pseudoge
NG 004159
NG 004160 Homo sapiens olfactory receptor, family 4, subfamily K, member 12 pseudog
             Homo sapiens olfactory receptor, family 4, subfamily K, member 11 pseudog
NG 004161
NG 004162 Homo sapiens olfactory receptor, family 4, subfamily Q, member 1 pseudoge
             Homo sapiens olfactory receptor, family 11, subfamily K, member 1 pseudog
NG 004163
             Homo sapiens olfactory receptor, family 11, subfamily J, member 2 pseudogo
NG 004164
NG 004165 Homo sapiens olfactory receptor, family 11, subfamily J, member 1 pseudogo
NG_004166 Homo sapiens olfactory receptor, family 11, subfamily H, member 3 pseudog
NG 004167 Homo sapiens olfactory receptor, family 7, subfamily K, member 1 pseudoge
NG_004168 Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene 5 (SEDLP5)
NG_004169 Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene 3 (SEDLP3)
NG_004170 Homo sapiens olfactory receptor, family 7, subfamily E, member 106 pseudo
             Homo sapiens olfactory receptor, family 7, subfamily E, member 105 pseudo
NG_004171
NG 004172 Homo sapiens olfactory receptor, family 4, subfamily K, member 16 pseudog
NG 004173
             Homo sapiens olfactory receptor, family 7, subfamily E, member 111 pseudo
              Homo sapiens olfactory receptor, family 7, subfamily E, member 104 pseudo
NG 004174
              Homo saplens olfactory receptor, family 7, subfamily E, member 101 pseudo
NG 004175
              Homo sapiens olfactory receptor, family 9, subfamily R, member 1 pseudoge
 NG_004176
              Homo sapiens olfactory receptor, family 9, subfamily M, member 1 pseudoge
 NG_004177
              Homo sapiens olfactory receptor, family 9, subfamily I, member 3 pseudocer
 NG 004178
              Homo sapiens olfactory receptor, family 9, subfamily G, member 3 pseudoge
 NG 004179
              Homo sapiens olfactory receptor, family 9, subfamily G, member 2 pseudoge
 NG_004180
              Homo sapiens olfactory receptor, family 8, subfamily R, member 1 pseudoge
 NG 004181
              Homo sapiens olfactory receptor, family 8, subfamily Q, member 1 pseudoge
 NG 004182
              Homo saplens olfactory receptor, family 8, subfamily L, member 1 pseudoge
 NG 004183
              Homo sapiens olfactory receptor, family 8, subfamily K, member 4 pseudoge
 NG 004184
 NG 004185 Homo sapiens olfactory receptor, family 8, subfamily J, member 2 pseudoger
 NG 004186 Homo sapiens olfactory receptor, family 7, subfamily A, member 128 pseudo
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NG 004188 Homo sapiens olfactory receptor, family 5, subfamily W, member 1 pseudogo
NG 004189 Homo sapiens olfactory receptor, family 5, subfamily P, member 4 pseudoge
NG 004190 Homo sapiens olfactory receptor, family 5, subfamily M, member 12 pseudog
NG 004191 Homo sapiens olfactory receptor, family 5, subfamily G, member 5 pseudoge
NG 004192 Homo sapiens olfactory receptor, family 5, subfamily G, member 4 pseudoge
NG 004193 Homo sapiens offactory receptor, family 5, subfamily F, member 2 pseudoge
NG 004194 Homo sapiens olfactory receptor, family 5, subfamily D, member 17 pseudog
NG_004195 Homo sapiens olfactory receptor, family 5, subfamily D, member 15 pseudog
NG_004196 Homo sapiens olfactory receptor, family 5, subfamily BR, member 1 pseudog
NG 004197 Homo sapiens olfactory receptor, family 5, subfamily BQ, member 1 pseudoc
NG 004198 Home sapiens olfactory receptor, family 5, subfamily BP, member 1 pseudog
NG 004199 Homo sapiens olfactory receptor, family 5, subfamily BN, member 1 pseudog
NG 004200 Homo sapiens olfactory receptor, family 5, subfamily BL, member 1 pseudog
NG 004201 Homo sapiens olfactory receptor, family 5, subfamily BE, member 1 pseudog
NG 004202 Homo sapiens olfactory receptor, family 5, subfamily BC, member 1 pseudog
             Homo sapiens olfactory receptor, family 5, subfamily BB, member 1 pseudog
NG 004203
             Homo sapiens olfactory receptor, family 5, subfamily BA, member 1 pseudog
NG 004204
NG 004205
             Homo sapiens olfactory receptor, family 5, subfamily B, member 19 pseudog
NG 004206
             Homo sapiens olfactory receptor, family 5, subfamily B, member 15 pseudog
             Homo sapiens olfactory receptor, family 5, subfamily AZ, member 1 pseudog
NG_004207
             Homo sapiens olfactory receptor, family 5, subfamily AQ, member 1 pseudoc
NG 004208
             Homo sapiens olfactory receptor, family 5, subfamily AP, member 1 pseudog
NG 004209
NG_004210 Homo saplens olfactory receptor, family 5, subfamily AN, member 2 pseudog
             Homo sapiens olfactory receptor, family 5, subfamily AM, member 1 pseudoc
NG 004211
NG_004212 Homo sapiens olfactory receptor, family 5, subfamily AK, member 3 pseudog
NG_004213 Homo sapiens olfactory receptor, family 5, subfamily AK, member 1 pseudog
NG 004214 Homo saplens olfactory receptor, family 56, subfamily A, member 7 pseudog
NG 004215 Homo sapiens olfactory receptor, family 52, subfamily Y, member 1 pseudog
NG 004216
             Homo sapiens olfactory receptor, family 52, subfamily V, member 1 pseudog
NG 004217 Homo sapiens olfactory receptor, family 52, subfamily U, member 1 pseudog
NG 004218 Home saplens olfactory receptor, family 52, subfamily T, member 1 pseudog
             Homo sapiens olfactory receptor, family 52, subfamily Q, member 1 pseudog
NG 004219
NG_004220 Homo sapiens olfactory receptor, family 52, subfamily P, member 1 pseudog
             Homo sapiens olfactory receptor, family 52, subfamily N, member 3 pseudog
NG 004221
NG_004222 Homo saplens olfactory receptor, family 52, subfamily H, member 2 pseudog
NG 004223
             Homo sapiens offactory receptor, family 52, subfamily E, member 7 pseudog
             Homo sapiens olfactory receptor, family 52, subfamily B, member 5 pseudog
NG 004224
NG_004225 Homo sapiens olfactory receptor, family 52, subfamily B, member 1 pseudog
NG_004226 Homo sapiens olfactory receptor, family 51, subfamily K, member 1 pseudog
             Homo sapiens olfactory receptor, family 51, subfamily E, member 1 pseudog
NG 004227
NG 004228 Homo sapiens olfactory receptor, family 51, subfamily C, member 1 pseudog
             Homo sapiens olfactory receptor, family 51, subfamily A, member 10 pseudo
NG 004229
             Homo sapiens olfactory receptor, family 4, subfamily R, member 3 pseudoge
NG_004230
             Homo sapiens olfactory receptor, family 4, subfamily R, member 2 pseudoge
NG_004231
             Homo sapiens olfactory receptor, family 4, subfamily D, member 8 pseudoge
NG 004232
             Homo sapiens olfactory receptor, family 4, subfamily D, member 7 pseudoge
NG 004233
             Homo sapiens olfactory receptor, family 4, subfamily C, member 14 pseudog
NG 004234
NG_004235 Homo sapiens olfactory receptor, family 4, subfamily A, member 8 pseudoge
             Homo sapiens olfactory receptor, family 4, subfamily A, member 7 pseudoge
NG 004236
             Homo sapiens olfactory receptor, family 4, subfamily A, member 3 pseudoce
NG 004237
              Homo sapiens olfactory receptor, family 4, subfamily A, member 21 pseudog
NG 004238
              Homo sapiens olfactory receptor, family 4, subfamily A, member 19 pseudog
NG 004239
              Homo sapiens olfactory receptor, family 4, subfamily A, member 18 pseudog
NG 004240
NG 004241
              Homo sapiens olfactory receptor, family 4, subfamily A, member 14 pseudog
              Homo sapiens olfactory receptor, family 4, subfamily A, member 13 pseudog
NG_004242
              Homo sapiens olfactory receptor, family 4, subfamily A, member 12 pseudog
NG 004243
NG_004244 Homo sapiens olfactory receptor, family 2, subfamily AH, member 1 pseudog
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NG\_004245 Homo sapiens olfactory receptor, family 10, subfamily Y, member 1 pseudog NG 004246 Homo sapiens olfactory receptor, family 10, subfamily W, member 1 (OR10V NG\_004247 Homo sapiens olfactory receptor, family 10, subfamily V, member 3 pseudog NG\_004248 Homo sapiens olfactory receptor, family 10, subfamily V, member 2 pseudog NG\_004249 Homo sapiens olfactory receptor, family 10, subfamily Q, member 2 pseudog NG 004250 Homo sapiens olfactory receptor, family 7, subfamily M, member 1 pseudoge NG 004251 Homo sapiens olfactory receptor, family 7, subfamily E, member 110 pseudo NG\_004252 Homo sapiens olfactory receptor, family 6, subfamily L, member 2 pseudoger NG\_004253 Homo saplens olfactory receptor, family 7, subfamily E, member 116 pseudo NG 004254 Homo sapiens olfactory receptor, family 7, subfamily E, member 108 pseudo NG\_004255 Homo sapiens olfactory receptor, family 2, subfamily AM, member 1 pseudog NG\_004256 Homo sapiens olfactory receptor, family 7, subfamily A, member 125 pseudo NG 004257 Homo sapiens olfactory receptor, family 9, subfamily P, member 1 pseudoge NG\_004258 Home sapiens olfactory receptor, family 9, subfamily N, member 1 pseudoge NG\_004259 Homo sapiens olfactory receptor, family 4, subfamily F, member 7 pseudoge NG\_004260 Homo sapiens olfactory receptor, family 2, subfamily W, member 6 pseudoge NG\_004261 Homo sapiens olfactory receptor, family 2, subfamily W, member 4 pseudoge NG 004262 Homo sapiens olfactory receptor, family 7, subfamily E, member 99 pseudog NG 004263 Home sapiens olfactory receptor, family 5, subfamily M, member 14 pseudoc NG 004264 Homo sapiens olfactory receptor, family 7, subfamily A, member 129 pseudo NG 004265 Homo sapiens olfactory receptor, family 7, subfamily A, member 122 pseudo NG 004266 Homo sapiens olfactory receptor, family 7, subfamily E, member 100 pseudo NG 004267 Homo sapiens olfactory receptor, family 5, subfamily AC, member 1 pseudog NG\_004268 Homo sapiens olfactory receptor, family 4, subfamily G, member 6 pseudoge NG\_004269 Homo sapiens olfactory receptor, family 9, subfamily H, member 1 pseudoge NG\_004270 Homo sapiens olfactory receptor, family 6, subfamily R, member 1 pseudoge NG\_004271 Homo sapiens olfactory receptor, family 6, subfamily K, member 1 pseudoge NG\_004272 Homo sapiens olfactory receptor, family 2, subfamily T, member 7 (OR2T7) r NG\_004273 Homo sapiens olfactory receptor, family 2, subfamily L, member 9 pseudoger NG 004274 Homo saplens olfactory receptor, family 2, subfamily L, member 6 pseudoger NG\_004275 Homo saplens olfactory receptor, family 2, subfamily L, member 5 (OR2L5) p NG 004276 Homo sapiens olfactory receptor, family 2, subfamily AQ, member 1 pseudoc NG 004277 Homo sapiens olfactory receptor, family 10, subfamily AE, member 1 pseudo NG 004278 Homo sapiens olfactory receptor, family 10, subfamily AA, member 1 pseudo NG 004279 Homo sapiens olfactory receptor, family 2, subfamily W, member 2 pseudoge NG\_004280 Homo sapiens olfactory receptor, family 2, subfamily B, member 7 pseudoge NG 004281 Homo sapiens olfactory receptor, family 51, subfamily N, member 1 pseudog NG 004282 Homo sapiens olfactory receptor, family 52, subfamily P, member 2 pseudog NG\_004283 Homo sapiens olfactory receptor, family 2, subfamily AP, member 1 (OR2AP NG\_004284 Homo sapiens olfactory receptor, family 11, subfamily M, member 1 pseudog NG 004285 Homo sapiens olfactory receptor, family 9, subfamily K, member 1 pseudoge NG 004286 Homo saplens olfactory receptor, family 5, subfamily AV, member 1 pseudog NG 004287 Homo sapiens olfactory receptor, family 6, subfamily P, member 1 (OR6P1) NG 004288 Homo sapiens olfactory receptor, family 6, subfamily K, member 4 pseudoge NG 004289 Home sapiens olfactory receptor, family 2, subfamily Al, member 1 pseudogo NG 004290 Homo saplens olfactory receptor, family 2, subfamily A, member 15 pseudog NG\_004291 Homo sapiens olfactory receptor, family 7, subfamily E, member 136 pseudo NG\_004292 Homo sapiens olfactory receptor, family 2, subfamily A, member 3 pseudoge NG 004293 Homo sapiens olfactory receptor, family 6, subfamily D, member 1 pseudoge NG 004294 Home sapiens offactory receptor, family 7, subfamily E, member 39 pseudog NG 004295 Homo sapiens olfactory receptor, family 4, subfamily C, member 50 pseudog NG\_004296 Homo sapiens offactory receptor, family 4, subfamily D, member 12 pseudog NG 004297 Homo sapiens olfactory receptor, family 7, subfamily E, member 149 pseudo NG 004298 Homo sapiens olfactory receptor, family 10, subfamily AF, member 1 pseudo NG 004299 Homo sapiens olfactory receptor, family 8, subfamily V, member 1 pseudoge NG 004300 Homo sapiens offactory receptor, family 5, subfamily BT, member 1 pseudog NG 004301 Homo sapiens olfactory receptor, family 8, subfamily T, member 1 pseudoge

NG\_004302 Homo sapiens olfactory receptor, family 11, subfamily P, member 1 pseudog NG 004303 Homo sapiens olfactory receptor, family 7, subfamily E, member 148 pseudo NG 004304 Homo sapiens olfactory receptor, family 52, subfamily Z, member 1 pseudog NG\_004305 Homo sapiens olfactory receptor, family 52, subfamily M, member 2 pseudog NG\_004307 Homo sapiens olfactory receptor, family 7, subfamily E, member 1 pseudoge NG\_004308 Homo sapiens olfactory receptor, family 10, subfamily J, member 8 pseudogr NG\_004309 Homo sapiens olfactory receptor, family 7, subfamily E, member 140 pseudo NG\_004310 Homo sapiens olfactory receptor, family 2, subfamily Q, member 1 pseudoge NG\_004311 Homo sapiens olfactory receptor, family 52, subfamily B, member 3 pseudog NG\_004312 Homo sapiens olfactory receptor, family 8, subfamily G, member 3 pseudoge NG 004313 Homo sapiens olfactory receptor, family 7, subfamily A, member 19 pseudog NG 004314 Homo sapiens olfactory receptor, family 7, subfamily A, member 130 pseudo NG 004315 Homo sapiens olfactory receptor, family 7, subfamily E, member 161 pseudo NG\_004317 Homo sapiens olfactory receptor, family 55, subfamily B, member 1 pseudog NG 004318 Homo saplens olfactory receptor, family 51, subfamily R, member 1 pseudog NG\_004319 Homo sapiens offactory receptor, family 52, subfamily K, member 3 pseudog NG\_004320 Homo sapiens olfactory receptor, family 51, subfamily A, member 9 pseudog NG\_004321 Homo saplens offactory receptor, family 51, subfamily F, member 5 pseudog NG\_004322 Homo saplens olfactory receptor, family 51, subfamily C, member 4 pseudog NG\_004323 Homo sapiens olfactory receptor, family 51, subfamily F, member 3 pseudog NG\_004324 Homo sapiens olfactory receptor, family 51, subfamily F, member 4 pseudog NG\_004325 Homo saplens olfactory receptor, family 51, subfamily A, member 6 pseudog NG 004326 Homo sapiens olfactory receptor, family 56, subfamily B, member 2 pseudog Homo sapiens olfactory receptor, family 4, subfamily A, member 40 pseudog NG 004327 NG 004328 Homo sapiens olfactory receptor, family 4, subfamily A, member 43 pseudog Homo sapiens olfactory receptor, family 4, subfamily A, member 6 pseudoge NG 004329 NG\_004330 Homo sapiens olfactory receptor, family 4, subfamily A, member 2 pseudoge NG 004331 Homo sapiens olfactory receptor, family 4, subfamily A, member 4 pseudoge NG 004332 Homo sapiens olfactory receptor, family 4, subfamily A, member 11 pseudog NG\_004333 Homo sapiens olfactory receptor, family 4, subfamily A, member 9 pseudoge NG 004334 Homo sapiens olfactory receptor, family 4, subfamily A, member 10 pseudog NG\_004335 Homo sapiens offactory receptor, family 4, subfamily A, member 17 pseudog NG 004336 Homo sapiens olfactory receptor, family 7, subfamily E, member 145 pseudo NG 004337 Homo sapiens olfactory receptor, family 2, subfamily AT, member 2 pseudog NG\_004338 Homo sapiens olfactory receptor, family 2, subfamily AT, member 1 pseudog NG\_004339 Homo saplens olfactory receptor, family 10, subfamily N, member 1 pseudog NG\_004340 Homo sapiens olfactory receptor, family 8, subfamily F, member 1 pseudoge NG\_004341 Homo sapiens olfactory receptor, family 8, subfamily A, member 2 pseudoge NG\_004342 Homo sapiens olfactory receptor, family 8, subfamily B, member 10 pseudog NG\_004343 Homo saplens olfactory receptor, family 5, subfamily BS, member 1 pseudog NG\_004344 Homo sapiens olfactory receptor, family 10, subfamily U, member 1 pseudog NG\_004345 Homo saplens olfactory receptor, family 6, subfamily C, member 5 pseudoge NG\_004346 Homo sapiens olfactory receptor, family 6, subfamily C, member 7 pseudoge NG 004347 Homo sapiens olfactory receptor, family 6, subfamily C, member 71 pseudog NG 004348 Homo sapiens olfactory receptor, family 6, subfamily U, member 2 pseudoge NG\_004349 Homo sapiens olfactory receptor, family 4, subfamily Q, member 2 pseudoge NG 004350 Homo sapiens olfactory receptor, family 4, subfamily U, member 1 pseudoge NG 004351 Homo sapiens olfactory receptor, family 4, subfamily T, member 1 pseudoge NG 004352 Homo sapiens olfactory receptor, family 11, subfamily G, member 1 pseudog NG 004353 Homo sapiens olfactory receptor, family 11, subfamily H, member 5 pseudog Homo sapiens olfactory receptor, family 11, subfamily H, member 7 pseudog NG 004354 NG 004355 Homo sapiens olfactory receptor, family 4, subfamily N, member 3 pseudoge NG 004356 Homo sapiens olfactory receptor, family 4, subfamily F, member 14 pseudog NG\_004357 Homo sapiens olfactory receptor, family 4, subfamily F, member 13 pseudog NG\_004358 Homo sapiens olfactory receptor, family 4, subfamily F, member 28 pseudog NG 004359 Homo sapiens olfactory receptor, family 4, subfamily F, member 8 pseudoge NG 004360 Homo sapiens offactory receptor, family 7, subfamily E, member 18 pseudog

Homo sapiens olfactory receptor, family 7, subfamily A, member 1 pseudoge NG 004361 NG 004362 Homo sapiens olfactory receptor, family 10, subfamily R, member 3 pseudog NG 004363 Homo sapiens olfactory receptor, family 6, subfamily K, member 5 pseudoge NG 004364 Homo sapiens olfactory receptor, family 10, subfamily J, member 2 pseudogi NG 004365 Homo sapiens olfactory receptor, family 10, subfamily J, member 7 pseudogo NG 004366 Homo sapiens offactory receptor, family 10, subfamily J, member 9 pseudogi NG 004367 Homo sapiens offactory receptor, family 10, subfamily J, member 4 pseudogi NG 004368 Homo sapiens olfactory receptor, family 7, subfamily E, member 23 pseudog NG 004369 Homo sapiens olfactory receptor, family 5, subfamily S, member 1 pseudoge NG\_004370 Homo sapiens olfactory receptor, family 7, subfamily E, member 55 pseudog NG\_004371 Homo sapiens olfactory receptor, family 7, subfamily E, member 35 pseudog NG 004372 Homo sapiens olfactory receptor, family 9, subfamily A, member 3 pseudoge NG\_004373 Homo sapiens olfactory receptor, family 2, subfamily R, member 1 pseudoge NG 004374 Homo sapiens olfactory receptor, family 10, subfamily AC, member 1 pseudo NG 004375 Homo sapiens olfactory receptor, family 2, subfamily A, member 13 pseudog NG 004376 Homo sapiens olfactory receptor, family 7, subfamily E, member 158 pseudo NG 004377 Homo sapiens olfactory receptor, family 13, subfamily E, member 1 pseudog NG 004378 Homo sapiens olfactory receptor, family 13, subfamily C, member 6 pseudog NG 004379 Homo sapiens olfactory receptor, family 2, subfamily S, member 1 pseudoge NG\_004380 Homo sapiens olfactory receptor, family 13, subfamily D, member 2 pseudog NG 004381 Homo sapiens olfactory receptor, family 11, subfamily N, member 1 pseudog NG 004382 Homo sapiens olfactory receptor, family 3, subfamily B, member 1 pseudoge NG 004383 Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene (LOC39259) NG 004384 Homo sapiens olfactory receptor, family 7, subfamily E, member 117 pseudo NG 004385 Homo sapiens olfactory receptor, family 7, subfamily E, member 102 pseudo NG\_004386 Homo sapiens offactory receptor, family 7, subfamily E, member 109 pseudo NG 004387 Homo saplens olfactory receptor, family 51, subfamily A, member 8 pseudog NG 004388 Homo sapiens offactory receptor, family 51, subfamily H, member 1 pseudog NG 004389 Home sapiens olfactory receptor, family 51, subfamily H, member 2 pseudog NG 004390 Homo saniens olfactory receptor, family 56, subfamily B, member 3 pseudog NG 004391 Homo saplens olfactory receptor, family 5, subfamily BK, member 1 pseudog NG 004392 Homo sapiens olfactory receptor, family 11, subfamily K, member 2 pseudog NG\_004393 Homo sapiens offactory receptor, family 10, subfamily J, member 6 pseudogi Homo sapiens olfactory receptor, family 7, subfamily E, member 46 pseudog NG 004394 NG\_004395 Homo sapiens olfactory receptor, family 7, subfamily A, member 121 pseudo NG\_004396 Homo sapiens YTH domain family 1 pseudogene (YTHDF1P) on chromosom NG\_004397 Homo sapiens olfactory receptor, family 10, subfamily AH, member 1 pseudo NG 004398 Homo sapiens olfactory receptor, family 7, subfamily E, member 59 pseudog NG 004399 Homo sapiens olfactory receptor, family 7, subfamily E, member 160 pseudo NG 004400 Homo sapiens olfactory receptor, family 13, subfamily D, member 3 pseudog NG 004401 Homo saplens olfactory receptor, family 10, subfamily AE, member 3 pseudo NG\_004402 Homo sapiens olfactory receptor, family 10, subfamily AK, member 1 pseudo NG 004403 Homo sapiens olfactory receptor, family 11, subfamily J, member 5 pseudogo NG 004404 Homo sapiens olfactory receptor, family 11, subfamily Q, member 1 pseudog NG 004405 Homo sapiens olfactory receptor, family 13, subfamily Z, member 1 pseudog NG\_004406 Homo sapiens olfactory receptor, family 13, subfamily Z, member 2 pseudog NG 004407 Homo sapiens olfactory receptor, family 1, subfamily M, member 4 pseudoge NG\_004408 Homo sapiens olfactory receptor, family 2, subfamily A, member 41 pseudog NG 004409 Homo sapiens offactory receptor, family 2, subfamily AO, member 1 pseudog NG 004410 Homo sapiens olfactory receptor, family 2, subfamily BH, member 1 pseudoc NG 004411 Homo sapiens olfactory receptor, family 2, subfamily T, member 32 pseudog NG 004412 Homo sapiens olfactory receptor, family 2, subfamily X, member 1 pseudoge NG 004413 Homo sapiens olfactory receptor, family 4, subfamily A, member 41 pseudog NG 004414 Homo sapiens olfactory receptor, family 4, subfamily A, member 42 pseudog NG 004415 Homo sapiens olfactory receptor, family 4, subfamily A, member 44 pseudog NG 004416 Homo sapiens olfactory receptor, family 4, subfamily A, member 45 pseudog NG 004417 Homo sapiens olfactory receptor, family 4, subfamily A, member 46 pseudog

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NG_004421 Homo sapiens olfactory receptor, family 4, subfamily C, member 48 pseudog
NG_004422 Homo sapiens olfactory receptor, family 4, subfamily C, member 49 pseudog
NG_004423 Homo sapiens offactory receptor, family 4, subfamily G, member 11 pseudog
NG_004424 Homo sapiens olfactory receptor, family 51, subfamily AB, member 1 pseudo
NG_004425 Homo sapiens olfactory receptor, family 51, subfamily B, member 8 pseudog
NG_004426 Homo sapiens offactory receptor, family 5, subfamily AC, member 4 pseudoc
NG 004427 Homo sapiens olfactory receptor, family 5, subfamily AO, member 1 pseudog
NG 004428 Homo sapiens olfactory receptor, family 5, subfamily J, member 7 pseudoger
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NG_004432 Homo sapiens olfactory receptor, family 6, subfamily C, member 72 pseudog
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NG 004434 Homo sapiens olfactory receptor, family 6, subfamily R, member 2 pseudoge
NG 004435 Homo sapiens olfactory receptor, family 7, subfamily E, member 155 nseudo
NG 004436 Homo sapiens olfactory receptor, family 7, subfamily E, member 159 pseudo
NG_004437 Homo sapiens olfactory receptor, family 7, subfamily 6, member 15 pseudog
NG 004438 Homo sapiens olfactory receptor, family 7, subfamily H, member 2 pseudoge
NG 004439 Homo sapiens olfactory receptor, family 8, subfamily A, member 3 pseudoge
NG 004440 Homo sapiens olfactory receptor, family 8, subfamily X, member 1 pseudoge
NG_004441 Homo sapiens olfactory receptor, family 4, subfamily C, member 17 pseudog
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NG 004444
             Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene (LOC414752
NG 004445
             Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene (LOC41475)
NG 004446
             Homo sapiens spondyloepiphyseal dysplasia, late, pseudogene 4 (SEDLP4)
NG_004625 Homo sapiens olfactory receptor, family 2, subfamily U, member 1 pseudoge
NG_004626 Homo sapiens olfactory receptor, family 13, subfamily I, member 1 pseudoge
NG 004627
             Homo sapiens olfactory receptor, family 1, subfamily AB, member 1 pseudog
NG_004628 Homo sapiens olfactory receptor, family 8, subfamily G, member 7 pseudoge
NG_004629 Homo sapiens olfactory receptor, family 7, subfamily E, member 96 pseudog
NG_004630 Homo saplens olfactory receptor, family 1, subfamily X, member 1 pseudoge
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NG_004632 Homo sapiens olfactory receptor, family 13, subfamily K, member 1 pseudog
NG_004633 Homo sapiens olfactory receptor, family 7, subfamily E, member 157 pseudo
NG_004634 Homo sapiens olfactory receptor, family 7, subfamily E, member 154 pseudo
NG_004635 Homo sapiens olfactory receptor, family 8, subfamily I, member 4 pseudoger
NG_004638 Homo sapiens glutathione S-transferase pi pseudogene (GSTPP) on chromc
NG_004639 Homo sapiens actin, gamma pseudogene (LOC414754) on chromosome Y
NG_004652 Homo sapiens olfactory receptor, family 2, subfamily AJ, member 1 (OR2AJ1
NG_004656 Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, ga
NG 004658 Homo sapiens MHC class III complement gene cluster, bimodular haplotype
NG 004662 Homo sapiens PTPN13-like, Y-linked pseudogene (LOC442865) on chromos
NG 004663 Homo sapiens PTPN13-like, Y-linked pseudogene (LOC442866) on chromos
NG 004666 Homo saplens olfactory receptor, family 7, subfamily E, member 31 pseudog
NG 004670 Homo sapiens serine/threonine kinase 22A (spermiogenesis associated) (ST
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NT 027140 Homo sapiens chromosome 13 genomic contig NT 028050 Homo sapiens chromosome 1 genomic contig NT 028251 Homo sapiens chromosome 8 genomic contig NT 028392 Homo sapiens chromosome 20 genomic contig NT 028395 Homo sapiens chromosome 22 genomic contig Homo sapiens chromosome X genomic contid NT 028405 NT 028413 Homo sapiens chromosome X genomic contig NT 029289 Homo sapiens chromosome 5 genomic contig NT 029419 Homo sapiens chromosome 12 genomic contig NT 029490 Homo sapiens chromosome 21 genomic contig NT\_029860 Homo sapiens chromosome 1 genomic contig NT\_029928 Homo sapiens chromosome 3 genomic contig NT 029998 Homo sapiens chromosome 7 genomic contig NT 030008 Homo sapiens chromosome 7 genomic contig NT 030058 Homo sapiens chromosome 9 genomic contig NT 030059 Homo sapiens chromosome 10 genomic contig Homo saplens chromosome 21 genomic contig NT 030187 Homo sapiens chromosome 21 genomic contig NT 030188 Homo sapiens chromosome 1 genomic contig NT 030584 NT\_030737 Homo sapiens chromosome 8 genomic contig NT\_030772 Homo saplens chromosome 10 genomic contig Homo saplens chromosome 17 genomic contig NT 030843 NT\_030871 Homo sapiens chromosome 20 genomic contig NT 030872 Homo sapiens chromosome 22 genomic contig NT\_031730 Homo sapiens chromosome 1 genomic contig Homo saplens chromosome 10 genomic contig NT 031847 NT 032962 Homo saplens chromosome 1 genomic contig NT 032968 Homo sapiens chromosome 1 genomic contig NT 032977 Homo sapiens chromosome 1 genomic contig Homo saplens chromosome 2 genomic contig NT 032994 NT 033000 Homo saplens chromosome 2 genomic contig NT 033172 Homo sapiens chromosome 6 genomic contig NT 033224 Homo sapiens chromosome 10 genomic contig NT 033330 Homo sapiens chromosome X genomic contig NT 033899 Homo saplens chromosome 11 genomic contig NT 033903 Homo sapiens chromosome 11 genomic contig Homo sapiens chromosome 11 genomic contig NT 033927 Homo sapiens chromosome 6 genomic contig NT 033948 Homo sapiens chromosome 7 genomic contig NT 033968 Homo sapiens chromosome 10 genomic contig NT 033985 NT\_034398 Homo sapiens chromosome 1 genomic contig NT 034400 Homo sapiens chromosome 1 genomic contig NT 034401 Homo saplens chromosome 1 genomic contig NT\_034403 Homo sapiens chromosome 1 genomic contig NT\_034410 Homo sapiens chromosome 1 genomic contig NT\_034471 Homo sapiens chromosome 1 genomic contig NT 034485 Homo sapiens chromosome 2 genomic contig Homo sapiens chromosome 2 genomic contig NT 034508 NT 034772 Homo sapiens chromosome 5 genomic contig Homo sapiens chromosome 5 genomic contig NT 034819 Homo sapiens chromosome 6 genomic contig NT 034880 NT 034885 Homo sapiens chromosome 7 genomic config Homo sapiens chromosome 9 genomic contig NT 035014 NT 035036 Homo sapiens chromosome 10 genomic contig NT 035040 Homo sapiens chromosome 10 genomic contig NT 035086 Homo saplens chromosome 11 genomic contig NT 035113 Homo sapiens chromosome 11 genomic contig

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NT 077946 Homo sapiens chromosome 1 genomic contig NT 077949 Homo sapi ens chromosome 1 genomic contig NT 077962 Homo sapiens chromosome 1 genomic contig NT 077964 Homo sapiens chromosome 1 genomic contig NT 077966 Homo saniens chromosome 1 genomic contig NT 077967 Homo sapiens chromosome 1 genomic contig NT 077970 Homo sapiens chromosome 1 genomic contig NT\_077988 Homo sapiens chromosome 1 genomic contig NT 077995 Homo sapiens chromosome 2 genomic contig NT 077999 Homo sapiens chromosome 2 genomic contig NT 078000 Homo sapiens chromosome 2 genomic contig NT 078003 Homo sapiens chromosome 2 genomic contig NT 078010 Homo sapiens chromosome 4 genomic contig NT 078012 Homo sapiens chromosome 4 genomic contig NT 078016 Homo sapiens chromosome 4 genomic contid NT 078018 Homo sapiens chromosome 5 genomic contig NT 078019 Homo sapiens chromosome 5 genomic contig NT 078020 Homo sapiens chromosome 6 genomic contig NT 078023 Homo sapiens chromosome 6 genomic contig NT\_078033 Homo sapilens chromosome 7 genomic contig NT\_078037 Homo sapiens chromosome 8 genomic contig NT\_078038 Homo sapiens chromosome 8 genomic contig NT 078040 Homo sapiens chromosome 9 genomic contig NT 078041 Homo sapiens chromosome 9 genomic contig NT\_078042 Homo sapiens chromosome 9 genomic contig NT 078043 Homo sapiens chromosome 9 genomic contig NT 078044 Homo sapiens chromosome 9 genomic contig NT 078045 Homo sapiens chromosome 9 genomic contig NT 078046 Homo saprens chromosome 9 genomic contig NT 078047 Homo sapiens chromosome 9 genomic contig NT 078048 Home saplens chromosome 9 genomic contig NT\_078049 Homo sapiens chromosome 9 genomic contig NT 078051 Homo sapiens chromosome 9 genomic contig NT\_078052 Homo sapiens chromosome 9 genomic contig NT 078053 Homo saplens chromosome 9 genomic contig NT 078055 Homo sapiens chromosome 9 genomic contig NT 078057 Homo sapiens chromosome 9 genomic contig NT 078058 Homo sapiens chromosome 9 genomic contig NT 078059 Homo sapiens chromosome 9 genomic contig NT 078061 Homo sapiens chromosome 9 genomic contig NT 078062 Homo sapiens chromosome 9 genomic contig NT 078063 Homo sapiens chromosome 9 genomic contig NT 078064 Homo sapiens chromosome 9 genomic contig NT\_078065 Homo sapiens chromosome 9 genomic contig NT 078066 Home sapiens chromosome 9 genomic contig NT 078067 Homo sapiens chromosome 9 genomic contig NT 078068 Homo sapiens chromosome 9 genomic contig NT\_078069 Homo sapiens chromosome 9 genomic contig NT\_078070 Homo sapiens chromosome 9 genomic contig NT 078071 Homo sapiens chromosome 9 genomic contig NT 078072 Homo sapiens chromosome 9 genomic contig NT 078074 Homo sapiens chromosome 9 genomic contig NT 078075 Homo sapiens chromosome 9 genomic contig NT 078076 Homo sapiens chromosome 9 genomic contig NT 078077 Homo sapiens chromosome 9 genomic contig NT 078078 Homo sapiens chromosome 9 genomic contig NT 078079 Homo sapiens chromosome 9 genomic contig

NT\_078081 Homo sapiens chromosome 9 genomic contig NT 078083 Homo sapiens chromosome 9 genomic contig Homo sapiens chromosome 10 genomic contig NT 078087 NT 078088 Homo sapiens chromosome 11 genomic contig NT 078092 Homo sapiens chromosome 13 genomic contid NT\_078094 Homo sapiens chromosome 15 genomic contig NT\_078095 Homo sapiens chromosome 15 genomic contig NT\_078096 Homo sapiens chromosome 15 genomic contig NT\_078099 Homo sapiens chromosome 16 genomic contig NT\_078100 Homo sapiens chromosome 17 genomic contig NT 078102 Homo sapiens chromosome 17 genomic contig NT 078103 Homo sapiens chromosome 19 genomic contig NT 078109 Homo sapiens chromosome X genomic contig NT 078110 Homo sapiens chromosome X genomic contig NT\_078114 Homo sapiens chromosome X genomic contig NT 078115 Homo sapiens chromosome X genomic contig NT 078116 Homo saplens chromosome X genomic contig NT\_078118 Homo sapiens chromosome X genomic contig NT 079482 Homo sapiens chromosome 1 genomic contig NT 079483 Homo sapiens chromosome 1 genomic contig NT 079484 Homo saplens chromosome 1 genomic contig NT 079485 Homo sapiens chromosome 1 genomic contig NT 079486 Homo sapiens chromosome 1 genomic contig NT 079487 Homo sapiens chromosome 1 genomic contig NT 079488 Homo saplens chromosome 1 genomic contig NT 079489 Homo sapiens chromosome 1 genomic contig NT 079490 Homo sapiens chromosome 1 genomic contig NT 079491 Homo sapiens chromosome 1 genomic contig NT 079492 Homo saplens chromosome 1 genomic contig NT\_079493 Homo saplens chromosome 1 genomic contig NT 079494 Homo sapiens chromosome 1 genomic contig NT 079495 Homo sapiens chromosome 1 genomic contig Homo saplens chromosome 1 genomic contig NT 079496 NT 079497 Homo saplens chromosome 1 genomic contig NT\_079498 Homo sapiens chromosome 1 genomic contig NT\_079499 Homo sapiens chromosome 1 genomic contig NT\_079500 Homo sapiens chromosome 1 genomic contig Homo sapiens chromosome 1 genomic contig NT\_079501 NT 079502 Homo sapiens chromosome 2 genomic contig NT\_079503 Homo sapiens chromosome 2 genomic contig NT 079504 Homo sapiens chromosome 2 genomic contig NT 079505 Homo sapiens chromosome 2 genomic contig NT 079506 Homo sapiens chromosome 3 genomic contig NT 079507 Homo sapiens chromosome 3 genomic contig NT 079508 Homo sapiens chromosome 3 genomic contig NT 079509 Homo sapiens chromosome 3 genomic contig NT 079510 Homo sapiens chromosome 4 genomic contig NT 079511 Homo sapiens chromosome 4 genomic contig NT 079512 Homo sapiens chromosome 4 genomic contig NT\_079513 Homo sapiens chromosome 5 genomic contig NT 079514 Homo sapiens chromosome 7 genomic contig NT 079515 Homo sapiens chromosome 7 genomic contig NT\_079516 Homo sapiens chromosome 7 genomic contig NT 079517 Homo sapiens chromosome 8 genomic contig NT 079518 Homo sapiens chromosome 8 genomic contig NT 079519 Homo sapiens chromosome 8 genomic contig NT 079520 Homo sapiens chromosome 8 genomic contig

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NT 079578 Homo sapiens chromosome X genomic contig
NT_079579 Homo sapiens chromosome X genomic contig
NT 079580 Homo sapiens chromosome X genomic contig
NT 079581 Home sapiens chromosome Y genomic contig, pseudoautosomal region
NT_079582 Homo sapiens chromosome Y genomic contig, pseudoautosomal region
NT_079583 Homo sapiens chromosome Y genomic contig, pseudoautosomal region
NT_079584 Homo sapiens chromosome Y genomic contig, pseudoautosomal region
NT 079585 Homo sapiens chromosome Y genomic contig, pseudoautosomal region
NT 079586 Home sapiens genomic contig
NT 079587 Homo sapiens genomic contig
NT_079588 Homo sapiens genomic contig
NT 079589 Homo sapiens genomic contig
NT 079590 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT 079591 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT 079592 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT 079593 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT_079594 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT_079595 Homo sapiens chromosome 7 genomic contig, alternate assembly
NT 079596 Home sapiens chromosome 7 genomic contig. alternate assembly
NT_079597 Homo sapiens chromosome 7 genomic contig, alternate assembly
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NT_079615 Homo sapiens genomic contig
NT 079616 Homo sapiens genomic contig
NT 079617 Homo sapiens genomic contig
NT_079618 Homo sapiens genomic contig
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NT_079624 Homo sapiens genomic contig
NT_079625 Homo sapiens genomic contig
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NT_086324 Homo sapiens chromosome 2 sequence, ENCODE region ENr112
NT 086325 Homo sapiens chromosome 4 sequence, ENCODE region ENr113
NT_086326 Homo saplens chromosome 10 sequence, ENCODE region ENr114
NT_086327 Homo sapiens chromosome 5 sequence, ENCODE region ENr115, ALTERN
NT_086328 Homo sapiens chromosome 2 sequence, ENCODE region ENr121
NT 086329 Home sapiens chromesome 18 sequence, ENCODE region ENr122
NT_086330 Homo saplens chromosome 12 sequence, ENCODE region ENr123
NT_086331 Homo sapiens chromosome 2 sequence, ENCODE region ENr124, ALTERN
NT_086332 Homo sapiens chromosome 2 sequence, ENCODE region ENr131
NT_086333 Homo sapiens chromosome 13 sequence, ENCODE region ENr132
NT 086334 Homo saplens chromosome 21 sequence, ENCODE region ENr133
NT_086335 Homo sapiens chromosome 4 sequence, ENCODE region ENr134, ALTERN
NT_086336 Homo sapiens chromosome 16 sequence, ENCODE region ENr211
NT 086337 Homo sapiens chromosome 5 sequence, ENCODE region ENr212
NT_086338 Homo sapiens chromosome 18 sequence, ENCODE region ENr213
NT_086339 Homo sapiens chromosome 4 sequence, ENCODE region ENr214, ALTERN
NT 086340 Home sapiens chromosome 5 sequence, ENCODE region ENr221
NT 086341 Homo sapiens chromosome 6 sequence, ENCODE region ENr222
NT 086342 Homo sapiens chromosome 6 sequence, ENCODE region ENr223
NT_086343 Homo sapiens chromosome 4 sequence, ENCODE region ENr224, ALTERN
NT 086344 Homo sapiens chromosome 1 sequence, ENCODE region ENr231
NT 086345 Homo sapiens chromosome 9 sequence, ENCODE region ENr232
NT 086346 Homo sapiens chromosome 15 sequence, ENCODE region ENr233
NT 086347 Homo sapiens chromosome 17 sequence, ENCODE region ENr234, ALTERI
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NT 086350 Homo sapiens chromosome 16 sequence, ENCODE region ENr313
NT 086351 Homo sapiens chromosome X sequence, ENCODE region ENr314, ALTERN
NT 086352 Homo sapiens chromosome 8 sequence, ENCODE region ENr321
NT 086353 Homo sapiens chromosome 14 sequence, ENCODE region ENr322
NT 086354 Homo sapiens chromosome 6 sequence, ENCODE region ENr323
NT 086355 Homo sapiens chromosome X sequence, ENCODE region ENr324
NT 086356 Homo sapiens chromosome 2 sequence, ENCODE region ENr331
NT 086357 Homo sapiens chromosome 7 sequence, ENCODE region ENm001
NT 086358 Homo sapiens chromosome 5 sequence, ENCODE region ENm002
NT 086359 Homo sapiens chromosome 11 sequence, ENCODE region ENm003
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NT_086362 Homo sapiens chromosome X sequence, ENCODE region ENm006
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NT 086365 Homo saplens chromosome 11 sequence, ENCODE region ENm009
NT 086366 Homo sapiens chromosome 7 sequence, ENCODE region ENm010
NT 086367 Homo sapiens chromosome 11 sequence, ENCODE region ENm011
NT 086368 Homo sapiens chromosome 7 sequence, ENCODE region ENm012
NT 086369 Homo saplens chromosome 7 sequence, ENCODE region ENm013
NT 086370 Homo saplens chromosome 7 sequence, ENCODE region ENm014
NT 086371 Homo sapiens chromosome 7 sequence, ENCODE region ENm015, ALTERI
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NT_086373 Homo sapiens chromosome 7 sequence, ENCODE region ENm017, ALTERI
NT 086374 Homo saplens chromosome 11 sequence, ENCODE region ENr332
NT 086375 Homo sapiens chromosome 20 sequence, ENCODE region ENr333
NT 086376 Homo sapiens chromosome 6 sequence, ENCODE region ENr334
NT 086377 Homo sapiens chromosome 9 sequence, ENCODE region ENr335, ALTERN
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gil50541960lrefINM 001002294.1[[50541960] gij50541958|ref|NM\_001002295.1|[50541958] gil50541945|ref|NM 001002296.1|[50541945] gi|50593020|ref|NM 001002755.1|[50593020] gil50593022|ref|NM 001002756.1|[50593022] gi|50593018|ref|NM 001002757.1|[50593018] gil50959166[ref[NM 001002758.1][50959166] gij50593525[ref]NM 001002759.1[[50593525] gij50959134|ref|NM 001002760.1|[50959134] gi|50959142|ref|NM 001002761.1|[50959142] gij50593536|ref|NM\_001002762.1|[50593536] glj50582995[ref[NM\_001002796.1][50582995] gij50658066[ref]NM\_001002799.1][50658066] gil50658062|refINM\_001002800.1|[50658062] gil50658076|ref|NM 001002810.1|[50658076] gil50658070lreflNM 001002811.1lf506580701 gil50658068|ref|NM 001002812.1|[50658068] ali50659103irefiNM 001002814.1[50659103] gij50878274|ref|NM 001002836.1|[50878274] gij50726959|ref|NM 001002837.1|[50726959] gl|50845415|ref|NM 001002838.1|[50845415] gij50726988|ref|NM\_001002840.1|[50726988] gij50845427|ref|NM\_001002841.1|[50845427] gil50811872|refINM 001002843.1|[50811872] gl|50811874|ref|NM\_001002844.1|[50811874] glj50811876|ref|NM\_001002845.1|[50811876] gl[50811882|ref|NM\_001002847.1|[50811882] gil50845400|refINM 001002848.1|[50845400] gli50845404|ref|NM 001002849.1|[50845404] glj50845385[ref[NM 001002857.1][50845385] gl[50845387|ref|NM 001002858.1|[50845387] gil50843834|ref|NM\_001002860,1|[50843834] gll50959183[ref[NM\_001002861.1][50959183] gl[50845410]ref[NM\_001002862.1][50845410] gl[50845413]ref[NM\_001002876.1][50845413] ali50959101lreflNM 001002877.1[50959101] gi|50959109|ref|NM 001002878.1|[50959109] all50959114|refINM 001002879.1|[50959114] gll50959131(reflNM 001002880.1)[50959131] gil50881949lrefiNM 001002881.1[[50881949] gi|50878301|ref|NM 001002901.1|[50878301] gl[50897297]ref[NM\_001002905.1][50897297] gij51093877|ref|NM\_001002906.1|[51093877] gij50897269|ref|NM\_001002907.1|[50897269] gi|50962881|ref|NM\_001002909.1|[50962881] gil50897271|ref|NM\_001002910.1|[50897271] gil50897277ireflNM 001002911.1[50897277] gil50897283ireflNM 001002913.1[[50897283] gl[51036593]ref[NM 001002914.1][51036593] gi|50897279|ref|NM 001002915.1|[50897279] gi|50897287|ref|NM\_001002916.1|[50897287] gi[50897281|ref|NM 001002917.1|[50897281] gi|50897291|ref|NM\_001002918.1|[50897291] gij50897285[ref]NM\_001002919.1[[50897285] gij50897293lrefINM 001002920.1[[50897293] gi|51092298|ref|NM 001002921.1|[51092298] gi|50897289|ref|NM 001002922.1|[50897289]

gi|50897295|ref|NM\_001002923.1|[50897295] gi|50959221|ref|NM\_001002924.1|[50959221] aii50979289irefiNM 001002925.1i[50979289] gil50962816|refINM\_001002926.1|[50962816] gi|51093829|ref|NM\_001003398.1|[51093829] gij50979287|ref|NM 001003399.1|[50979287] gl|51093858|ref|NM\_001003406.1|[51093858] gij51011128|ref|NM 001003443.1|[51011128] gij51093852|ref|NM 001003656.1|[51093852] gi|51092269|ref|NM 001003665.1|[51092269] gij51093707|ref|NM 001003674.1|[51093707] gij51093709|ref|NM\_001003675.1|[51093709] gil51093378|ref|NM 001003679.1|[51093378] gil51093380lrefINM 001003680.1l[51093380] gil46488942|ref|NM 001079.3|[46488942] gi|27477067|ref|NM\_001132.1|[27477067] gi|26667190|ref|NM\_001222.2|[26667190] gil19115953|ref|NM 001369.1|[19115953] gi|33350931|ref|NM 001376.2|[33350931] gij24307878|ref|NM 001378.1|[24307878] gl|46195706|ref|NM\_001410.1|[46195706] gi|34222091|ref|NM\_001547.3|[34222091] gi|41352711|ref|NM\_001556.1|[41352711] glj27764862|ref|NM\_001636.1|[27764862] gi|27764864|ref|NM\_001763.1|[27764864] ali26105977irefiNM 001810.4li261059771 gi|31711991|ref|NM\_001931.2|[31711991] gl|38348231|ref|NM\_001947.1|[38348231] gli33413399[ref]NM 001984.1[[33413399] gi|24307882|ref|NM\_001986.1|[24307882] gl|38327038|ref|NM\_002154.3|[38327038] gi|34222089|ref|NM\_002242.2|[34222089] gi|28827775|ref|NM\_002348.1|[28827775] gl|27502374|ref|NM\_002399.2|[27502374] gl|23111004|ref|NM\_002404.1|[23111004] gl|27764860|ref|NM\_002471.1|[27764860] aii23510390irefiNM 002498.1[[23510390] ali28195383ireflNM 002523.1[[28195383] gi|47078228|ref|NM 002596.2|[47078228] gl[24429565]ref[NM 002603.1][24429565] gij24429563|ref|NM 002604.1|[24429563] gi|47132535|ref|NM\_002605.2|[47132535] glj33300667[ref]NM\_002679.1[[33300667] gl|38257138|ref|NM\_002735.1|[38257138] gij38257140|ref|NM\_002746.1|[38257140] gli23110943/refINM 002791.1/[23110943] gi|23110924|ref|NM\_002798.1|[23110924] gil37574611[ref|NM 002972.1][37574611] gil28076868|ref|NM 002974.1|[28076868] gil40548377[ref|NM 002998.2][40548377] gij48475051|ref|NM 003013.1|[48475051] gij27777631|ref|NM\_003047.2|[27777631] gi|29826338|ref|NM\_003106.2|[29826338] gi|38373692|ref|NM\_003111.1|[38373692] gil27764866|ref|NM 003179.1|[27764866] gli41350334[ref|NM 003196.1][41350334] gi|27777635|ref|NM\_003200.1|[27777635]

gi|23308730|ref|NM\_003302.1|[23308730] gi|23308728|ref|NM\_003415.1|[23308728] gi|38564321|ref|NM 003444.1|[38564321] gi|31083149|ref|NM 003502,2|[31083149] gi|27436923|ref|NM 003517.2|[27436923] gi|31657108|ref|NM\_003575.1|[31657108] gi|20070102|ref|NM 003598.1|[20070102] gi|49170033|ref|NM\_003638.1|[49170033] gi|41872688|ref|NM\_003660.2|[41872688] gi|27501445|ref|NM\_003677.2|[27501445] gi|50053005|ref|NM\_003700.1|[50053005] gi|26006850|ref|NM\_003719.1|[26006850] gi|22208998|ref|NM\_003724.1|[22208998] gl|30089979|ref|NM 003741,2|[30089979] gi|34335255|ref|NM 003817.1|[34335255] gi|22035625|ref|NM 003818,2|[22035625] gi|28872760|ref|NM 003828.1|[28872760] gi|28827773|ref|NM 003845.1|[28827773] gl|29788999|ref|NM\_003848.1|[29788999] gi|38176157|ref|NM\_003858.2|[38176157] gi|26190607|ref|NM\_003898.1|[26190607] gi|33667022|ref|NM\_003907.1|[33667022] gi|27501463|ref|NM\_003957.1|[27501463] gi|48762941|ref|NM\_003959.1|[48762941] gi|50345994|ref|NM\_003972.2|[50345994] gl|22027631|ref|NM\_004080.1|[22027631] all45598368|ref|NM\_004097.1|[45598368] gij34304365|ref|NM 004118,3|[34304365] gll41352692|ref|NM\_004136.1|[41352692] gl|38570145|ref|NM\_004200.2|[38570145] gi|32698677|ref|NM\_004220,1|[32698677] gi|32698673|ref|NM\_004241.1|[32698673] gl|23238229|ref|NM\_004242.2|[23238229] gl|46488922|ref|NM 004319.1|[46488922] gi|32967316|ref|NM 004439.3|[32967316] gli24307886[ref]NM\_004498.1][24307886] gil42415470|ref|NM\_004650.1|[42415470] gl|37537693|ref|NM\_004685.2|[37537693] gi|34335257|ref|NM\_004691.3|[34335257] gl|34222090|ref|NM\_004764.2|[34222090] gl|22094078|ref|NM\_004773.1|[22094078] gi|37674229|ref|NM\_004816.2|[37674229] g||47078220|ref|NM\_004840.2||47078220| gl|50593006|ref|NM 004884,2||505930061 gi|31377467|ref|NM\_004946.1|[31377467] gi|40254811|ref|NM\_004947.2|[40254811] gi|19718754|ref|NM 005054,1|[19718754] gl|15812217|ref|NM 005105,2|[15812217] gi|40254809|ref|NM\_005126,2|[40254809] gi|42718010|ref|NM\_005140.1|[42718010] gi|22547203|ref|NM\_005144.2|[22547203] gil24307888|ref|NM\_005153.1|[24307888] gi|32964829|ref|NM\_005202.1|[32964829] gil20270187|ref|NM 005240.1|[20270187] gi|29789001|ref|NM\_005241.1|[29789001] gi|22779859|ref|NM 005250,1|[22779859] gi|22027523|ref|NM\_005272.2|[22027523]

gi|50263051|ref|NM\_005278.3|[50263051] gi|42560226|ref|NM 005349.2|[42560226] gi|34147322|ref|NM\_005376.2|[34147322] gi|49087131|ref|NM\_005407.1|[49087131] gi|23199982|ref|NM\_005482.1|[23199982] gi|29788789|ref|NM\_005487.2|[29788789] gi|34147320|ref|NM 005533,2|[34147320] gi|38788415|ref|NM 005559,2|[38788415] gi|30840979|ref|NM\_005595.1|[30840979] gi|31652243|ref|NM 005650.1|[31652243] gi|33667050|ref|NM 005669.3|[33667050] gi|21536364|ref|NM\_005680.1|[21536364] gi|24307898|ref|NM\_005702.1|[24307898] gi|22027540|ref|NM\_005707.1|[22027540] gi|32698675|ref|NM\_005779.1|[32698675] gi|44771197|ref|NM\_005788.1|[44771197] gi|31317304|ref|NM\_005791.1|[31317304] gi|27501451|ref|NM\_005840.1|[27501451] gl|40538725|ref|NM 005841.1|[40538725] gi|39930312|ref|NM 005848,1|[39930312] gl|33469918|ref|NM 005914.2|[33469918] gi|22027533|ref|NM\_005942.1|[22027533] gl|22027535|ref|NM\_005943.2|[22027535] gi|28866959|ref|NM\_005946.1|[28866959] gi|27414494|ref|NM\_005947.1|[27414494] gi|28866946|ref|NM\_005949.1|[28866946] gl|41406063|ref|NM\_005964.1|[41406063] gi|21389314|ref|NM\_005984.1|[21389314] gl|32567783|ref|NM 005995,2|[32567783] gi|49457785|ref|NM 006036.1|[49457785] gl|48427666|ref|NM\_006040.1|[48427666] gl|50052980|ref|NM\_006062,1|[50052980] gi|24307902|ref|NM\_006091.1|[24307902] gl|24307904|ref|NM\_006108,1|[24307904] gl|27262631|ref|NM\_006133.1|[27262631] gi|40549417|ref|NM 006151.1|[40549417] gi|38257154|ref|NM\_006154.1|[38257154] gil23510318|ref|NM\_006172.1|[23510318] gi|46049091|ref|NM\_006175.3|[46049091] gi|33354284|ref|NM\_006210.1|[33354284] gi|34147323|ref|NM\_006216.2|[34147323] gi|47834321|ref|NM\_006266.2|[47834321] gi|22325384|ref|NM\_006277.1|[22325384] g||17388802|ref|NM\_006452.2|[17388802] gil37537515lreflNM 006524.1[37537515] gil38492355lreflNM 006591.1l(384923551 gi|38176299|ref|NM 006617.1|[38176299] gi|24307912|ref|NM 006630.1|[24307912] gi|37622348|ref|NM 006631,2|[37622348] gi|46361971|ref|NM 006635,2|[46361971] gi|28269671|ref|NM 006642,1|[28269671] gi|41393186|ref|NM\_006647.1|[41393186] gil47078221 ref[NM\_006673,2|[47078221] gi|34147321|ref|NM\_006714.2|[34147321] gi|38156700|ref|NM\_006722.1|[38156700] gil27901802|refINM 006742.1|[27901802] gil45827705|ref|NM 006775,1|[45827705]

gi|24307916|ref|NM\_006828.1|[24307916] gi|29789005|ref|NM\_006832.1|[29789005] gi|24307918|ref|NM\_006857.1|[24307918] gi|37577165|ref|NM\_006859.2|[37577165] gi|24497546|ref|NM 006897.1|[24497546] gi|38505169|ref|NM\_006909.1|[38505169] gi|24307922|ref|NM\_006916.1|[24307922] gi|29893558|ref|NM 006920,2|[29893558] gi[39930603]ref[NM 006939.1][39930603] gi|24307874|ref|NM\_006955.1|[24307874] gi|50512287|ref|NM\_006956.1|[50512287] gi|42734301|ref|NM 006959,1|[42734301] gi|38045955|ref|NM 006961.2|[38045955] gil46195704|ref|NM\_006969.1|[46195704] gi|24307924|ref|NM\_006973.1|[24307924] gi|28274681|ref|NM\_006974.1|[28274681] gi|27734718|ref|NM\_006996.1|[27734718] gi|42734307|ref|NM\_007001.1|[42734307] gi|38569504|refINM\_007010,2|[38569504] gl|50345874|ref|NM\_007041.2|[50345874] gi|45592958|ref|NM 007078,1|[45592958] gi|23510456|ref|NM 007130,1|[23510456] gi|41152069|ref|NM\_007131,2|[41152069] gi|24307936|ref|NM 007135.1|[24307936] gi|46559734|ref|NM\_007137.1|[46559734] ali37537683|ref|NM\_007139.2|[37537683] gi|24307934|ref|NM\_007149.1|[24307934] gi|42476268|ref|NM\_007156.2|[42476268] gl|48675875|ref|NM\_007157.2|[48675875] gi|24307932|ref|NM\_007162.1|[24307932] gi|32698687|ref|NM 007174.1|[32698687] gi|27881505|ref|NM\_007189.1|[27881505] gl|39930314|ref|NM 007224.1|[39930314] gi|27754211|ref|NM 007225,1|[27754211] gi|25282390|ref|NM 007243.1|[25282390] gi|33667071|ref|NM\_007261.1|[33667071] gi|33469984|ref|NM\_007270.2|[33469984] gil38148698|refINM\_007277.3|[38148698] gi|24307928|ref|NM\_007280.1|[24307928] gi|40804749|ref|NM\_007349.2|[40804749] gi|46276865|ref|NM\_007356.1|[46276865] gi|34147324|ref|NM\_012073.2|[34147324] gi|29171733|ref|NM 012154,2|[29171733] ali30061488|ref|NM\_012156.2|[30061488] gi|30089921|ref|NM\_012167.1|[30089921] gil30795120lreflNM 012174.1lf307951201 gl|45580705|ref|NM\_012184.3|[45580705] gi|34222094|ref|NM\_012212.2|[34222094] gi|41872672|ref|NM\_012224.1|[41872672] gil42734429lrefINM 012232.2l[42734429] gil24307942lrefINM 012235,1[[24307942] gi|30410776|ref|NM 012271,1|[30410776] gi|29789007|ref|NM 012272.1|[29789007] gi|38569492|ref|NM 012284.1|[38569492] gi|47834347|ref|NM 012292.2|[47834347] gi|27477040|ref|NM\_012305.1|[27477040] gi|19743793|ref|NM\_012309.1|[19743793]

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gi|29366811|ref|NM 012315.1|[29366811] g||27544940|ref|NM\_012335.2||27544940| gi|46048142|ref|NM\_012363.1|[46048142] gi[50052933]ref[NM\_012364.1][50052933] gi|45504385|ref|NM 012367,1|[45504385] gi|50897263|ref|NM 012374.1|[50897263] gi|28570169|ref|NM 012378.1|[28570169] gi|31657128|ref|NM 012393.1|[31657128] gi|31317308|ref|NM\_012398.1|[31317308] gi|45331212|ref|NM\_012416.1|[45331212] gi|24430130|ref|NM\_012477.2|[24430130] gi|24430131|ref|NM 012478.2|[24430131] gi|24307962|ref|NM\_013304.1|[24307962] gi|23943857|ref|NM\_013321.1|[23943857] gi|32698691|ref|NM\_013373.1|[32698691] gi|46488914|ref|NM\_014010.3|[46488914] gi|40217846|ref|NM\_014014.2|[40217846] gi|34147338|ref|NM\_014089.2|[34147338] gi|32483376|ref|NM 014098.2|[32483376] gi|31657139|ref|NM 014215.1|[31657139] gi|21265100|ref|NM 014220.1|[21265100] gi|23943853|ref|NM\_014224.1|[23943853] gi|21265036|ref|NM\_014243.1|[21265036] gi|29789055|ref|NM\_014261.1|[29789055] gi|24307946|ref|NM\_014282.1|[24307946] gi|24307948|ref|NM\_014284.1|[24307948] gi|24307950|ref|NM\_014290.1|[24307950] gi|24307952|ref|NM 014301.1|[24307952] gi|22507408|ref|NM 014346.1|[22507408] gi|24307954|ref|NM 014376,1|[24307954] gli7657336|ref|NM 014381.1|[7657336] gi|24415382|ref|NM 014389.1|[24415382] gi|50726958|ref|NM\_014422.2|[50726958] gi|30794501|ref|NM\_014435.1|[30794501] gli23943855|ref|NM\_014441.1|[23943855] gij33859667|ref|NM\_014455.1|[33859667] gi|46048172|ref|NM 014460.2|[46048172] gi|50593521|ref|NM\_014472.3|[50593521] ali21702741[ref|NM\_014494.1][21702741] gi|27477044|ref|NM\_014507.1|[27477044] gli22907038[ref]NM\_014508.2[[22907038] gi|50726962|ref|NM\_014510.1|[50726962] gi|27436930|ref|NM\_014562,2|[27436930] gi|32698685|ref|NM\_014568.1|[32698685] gil18959199lrefINM 014572.1[18959199] gi|32698695|ref|NM 014573.1|[32698695] gi|30794503|ref|NM\_014594.1|[30794503] gi|23943911|ref|NM\_014602.1|[23943911] gi[32698689]ref[NM\_014603.1][32698689] gi|34222095|ref|NM 014607,2|[34222095] gil24307968|ref|NM\_014608.1|[24307968] gi|24415403|ref|NM\_014611.1|[24415403] gi|24797105|ref|NM\_014613.1|[24797105] gi|40788002|ref|NM\_014614.1|[40788002] gi|44955925|ref|NM\_014615.1|[44955925] gi|34878694|ref|NM 014647.1|[34878694] gi|45237192|ref|NM 014655.1|[45237192]

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gi|24307960|ref|NM 014657,1|[24307960] gi|42734311|ref|NM 014667.1|[42734311] gi|38788371|ref|NM 014691.1|[38788371] gi|31317300|ref|NM 014697.1|[31317300] gi|45120116|ref|NM 014701.1|[45120116] gi|24307972|ref|NM 014756.1][24307972] gi|40538727|ref|NM 014798.1|[40538727] gi|29789059|ref|NM 014802.1|[29789059] gi|38201615|ref|NM\_014836.3|[38201615] gil45827807lreflNM 014839.3l[45827807] gi|24307966|ref|NM 014850.1|[24307966] gil33469146lrefINM 014854.1[[33469146] gil28372520lreflNM 014858.11[28372520] gij42734318|ref|NM 014881,2|[42734318] gij38490530jrefINM 014884,1[[38490530]] gi|19913345|ref|NM 014919.1|[19913345] gi|42542404|ref|NM 014955.1|[42542404] gi|50345869|ref|NM 014957.2|[50345869] gi|44888817|ref|NM\_014974.1|[44888817] gi|45120118|ref|NM\_014975.1|[45120118] gi|21902518|ref|NM\_014982.1|[21902518] ali41054863irefINM 014989.2lf410548631 gij31317271|refINM\_014991.3|[31317271] gil21071076|ref|NM 014992,1|[21071076] ali44917618irefiNM 014997.1[44917618] gi|24307970|ref|NM 015000.1|[24307970] gl|39725632|ref|NM 015004.2|[39725632] gi|39930342|ref|NM 015008.1|[39930342] gi[30794499]ref[NM 015013.1][30794499] gi|38016126|ref|NM\_015014.1|[38016126] gi|45504379|ref|NM\_015015.1|[45504379] gi|42516566|ref|NM\_015017.3|[42516566] gi|34577117|ref|NM\_015018.2|[34577117] gi|30061508|ref|NM\_015022.2|[30061508] gli39930344lreflNM 015027,1[[39930344] gil23097291lreflNM 015029.1l[23097291] gij38524621|ref|NM 015033.1|[38524621] gl|40317630|ref|NM 015035,2|[40317630] gl|42734322|ref|NM 015037.1|[42734322] gi|25141321|ref|NM\_015039.2|[25141321] gi|50881947|ref|NM\_015040.2|[50881947] gi|42734324|ref|NM\_015045.1|[42734324] gl|22095330|ref|NM\_015047.1|[22095330] gil24307982lrefINM 015050.11[24307982] gil24307992lreflNM 015052.11[24307992] al|30911100|ref|NM 015055.1|[30911100] gi|22035664|ref|NM 015059.1|[22035664] gi|24307986|ref|NM 015061.1|[24307986] gi|21359817|ref|NM 015065.1|[21359817] gi|25777691|ref|NM\_015066.1|[25777691] gi|46359074|ref|NM\_015069.2|[46359074] gi|49355783|ref|NM\_015076.3|[49355783] gil31742504lreflNM 015078.2l[31742504] gil40018619lrefINM 015079.2l[40018619] gil46309460|ref|NM 015085.2|[46309460] gij40806197[ref[NM\_015087,3][40806197] gi|24307990|ref|NM 015089.1|[24307990]

gi|44888819|ref|NM\_015091.1|[44888819] gi|31657120|ref|NM\_015094.1|[31657120] gi|29826340|ref|NM 015099.2|[29826340] gi|46397389|ref|NM\_015100.2|[46397389] gi|34304361|ref|NM\_015102.2|[34304361] gi|28933450|ref|NM 015103.1|[28933450] gi|24307994|ref|NM\_015106.1|[24307994] gi|32698699|ref|NM\_015107.1|[32698699] gi[24850455|ref[NM\_015110.1][24850455] gi|32698693|ref|NM\_015115.1|[32698693] gi|33859669|ref|NM 015116.1|[33859669] gi|30794493|ref|NM\_015117.1|[30794493] gi|27436958|ref|NM\_015120.2|[27436958] gi|29789053|ref|NM\_015122.1|[29789053] gi|50980306|ref|NM\_015134.2|[50980306] gi|34222098|ref|NM\_015138.2|[34222098] gi[34222096]ref[NM\_015141.2][34222096] gl[24308008|ref|NM\_015143.1|[24308008] gl|21735418|ref|NM\_015144.1|[21735418] gi|41872576|ref|NM 015150.1|[41872576] gi|45827691|ref|NM\_015151.2|[45827691] gi|38424072|ref|NM 015157.1|[38424072] gl[23510374]ref[NM\_015158.1][23510374] gi|24308012|ref|NM\_015160.1|[24308012] gi|24308006|ref|NM\_015161.1|[24308006] gi|23943859|ref|NM\_015167.1|[23943859] gl|29789063|ref|NM\_015170.1|[29789063] gi|46049062|ref|NM\_015171.1|[46049062] gi|38016902|ref|NM 015172.2|[38016902] gi|50658060|ref|NM\_015173.2|[50658060] gl[34222099|ref|NM 015184,2|[34222099] gi|39930348|ref|NM\_015187.1|[39930348] gl[33667083]ref[NM\_015190.3][33667083] gi[38569459]ref[NM\_015191.1][38569459] gl|31581523|ref|NM\_015198.2|[31581523] gl|46195712|ref|NM\_015199.1|[46195712] gi|22094120|ref|NM\_015200.1|[22094120] gi|40353770|ref|NM 015201.3|[40353770] gl|45433544|ref|NM\_015203.2|[45433544] gi|47271353|ref|NM\_015210.1|[47271353] gi|44889474|ref|NM\_015213.2|[44889474] gi|24308034|ref|NM\_015219.1|[24308034] ali39930350|ref|NM\_015221.1|[39930350] gl|40254858|ref|NM\_015229,2|[40254858] gil44771172|refINM 015234.3|[44771172] gi|29789057|refINM\_015238.1|[29789057] gi|35493724|ref|NM\_015243.2|[35493724] gi|38683796|ref|NM\_015245.1|[38683796] gi|44917607|ref|NM\_015246.1|[44917607] gi|21735416|ref|NM 015250.1|[21735416] gi|44771179|ref|NM 015252.2|[44771179] gi|27597060|ref|NM\_015255.1|[27597060] gi|46255054|ref|NM\_015259.3|[46255054] gi|45356150|ref|NM\_015261.1|[45356150] gl[19745147]ref[NM\_015263.1][19745147] gi[38016201|ref|NM\_015265.1][38016201] gi|41872702|ref|NM 015266,1|[41872702]

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gil42734330lrefINM 015268.1lf427343301 gil50659092lrefINM 015274.1lf506590921 gil40018628/refINM 015275.1/(40018628) gi|45935384|ref|NM\_015278.3|[45935384] gi|24308026|ref|NM 015281.1|[24308026] gi|31563536|ref|NM 015282.1|[31563536] gi|38568177|ref|NM 015284.1|[38568177] gi|24586683[ref[NM 015286.4][24586683] gi|33563285|ref|NM 015289.1|[33563285] gi|19526752|ref|NM 015293.1|[19526752] gi|24308028|ref|NM\_015296.1|[24308028] gi|34222097|ref|NM\_015305.2|[34222097] gi|24308032|ref|NM 015308.1|[24308032] gl|39725633|ref|NM\_015315.2|[39725633] ai|18699719|ref|NM\_015316.1|[18699719] gi|38787940|ref|NM\_015319.2|[38787940] ai|34732708|ref|NM 015321.1|[34732708] gi|37059722|ref|NM\_015323.2|[37059722] gi[24308040|ref[NM\_015327.1|[24308040] gi|24308042|ref|NM\_015328.1|[24308042] gi|50726969|ref|NM\_015329.2|[50726969] gi|51036581|ref|NM 015330.1|[51036581] gi|24638432|ref|NM 015331.1|[24638432] gi|47575843|ref|NM\_015335.2|[47575843] gi|29244580|ref|NM\_015336.1|[29244580] gi[29570781|ref[NM\_015338.3|[29570781] gi|25121986|ref|NM\_015341.2|[25121986] gl|24308048|ref|NM\_015342.1|[24308048] gli40548414lrefINM 015345.2l[40548414] gi|38202204|ref|NM 015346.2|[38202204] gl|50726971|ref|NM\_015347.2|[50726971] gi|21245133|ref|NM\_015350.1|[21245133] gli27436888lrefINM 015352.1[[27436888] gij28872811[ref[NM\_015358.1][28872811] gi|47271355|ref|NM\_015359.1|[47271355] gl|39930352|ref|NM\_015360.2|[39930352] gi/31742497/refINM 015374.1/[31742497] gil40806178/refINM 015375.1/[40806178] ai|42734332|ref|NM 015378.1|[42734332] gij29789067|ref|NM 015381.1|[29789067] gi|32698701|ref|NM 015382.1|[32698701] gi|21070955|ref|NM\_015386.1|[21070955] gi|32698709|ref|NM\_015391.1|[32698709] gl|32698703|ref|NM\_015395.1|[32698703] gli22218618lrefINM 015397.1l[22218618] gij45827789/refINM 015404.1/[45827789] gli24308052|refINM\_015411.1|[24308052] gij24308054|ref|NM 015412.1|[24308054] gi|50659097|ref|NM 015430.2|[50659097] gil40353772/refINM 015431.2/[40353772] gi|45827720|ref|NM 015433.2|[45827720] gij24308060|ref|NM 015436.1|[24308060] gi|31083115|ref|NM\_015439.2|[31083115] gi|40018634|ref|NM\_015440.3|[40018634] gi|46195718|ref|NM\_015441.1|[46195718] gil41152088/refINM 015443.2/[41152088] gij22001414/refiNM 015444.1/[22001414]

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gij24308066|ref|NM 015446.1|[24308066] gi|40538729|ref|NM 015447.1|[40538729] gl|39930354|ref|NM 015448.1|[39930354] gi[41152071|ref|NM\_015457,2|[41152071] gi|45827805|ref|NM\_015459.3|[45827805] gil23308602|refINM 015460.1|[23308602] gi|24308068|ref|NM\_015461.1|[24308068] gi|24308070|ref|NM\_015463.1|[24308070] gil23943784|ref|NM 015464.1|[23943784] gi[22001416]ref[NM\_015465.1][22001416] gi[24308072]refINM 015466.1[[24308072] gi|22267435|reflNM 015469.1|[22267435] gi|24308074|ref|NM 015470.1|[24308074] gi|46195780|ref|NM 015475.2|[46195780] gij24308076[ref]NM 015476.1][24308076] gl|23397665|ref|NM\_015477.1|[23397665] gi[24308078|ref[NM\_015481.1|[24308078] gi|45120110|ref|NM\_015483.1|[45120110] gil37059800|ref|NM 015488,3|[37059800] gi[24308080]ref[NM 015503.1][24308080] gli38524593 refINM 015508,2 [38524593] gil39930360(ref|NM 015518,1)[39930360] gl|40548417|ref|NM 015522.2|[40548417] gl[24308084]ref[NM 015529.1][24308084] gl|46195720|ref|NM 015531.1|[46195720] gi|31377766|ref|NM\_015532.2|[31377766] gl|40254867|ref|NM\_015534.3|[40254867] gli24308086[ref]NM\_015541.1[[24308086] ali25777708|refINM\_015547,2|[25777708] gi|34577048|ref|NM\_015548,2|[34577048] gil40354211lrefINM 015553.1lf403542111 ai|20127147|ref|NM 015555.1|[20127147] gl|24308088|ref|NM 015557.1|[24308088] gi|39777611|ref|NM 015558.3|[39777611] gi|18860828|ref|NM\_015560.1|[18860828] gl[31657110]ref[NM\_015565.1][31657110] gl|40217822|ref|NM\_015567.1|[40217822] all34335276|refINM\_015568,2|[34335276] ail42544242irefINM 015569,2lf425442421 ai|42476298|ref|NM 015575,2|[42476298] ai|34577113|ref|NM 015576.1|[34577113] gil24308092lrefINM 015578.1l[24308092] gi|34222103|ref|NM 015585,2|[34222103] gl|50811833|ref|NM\_015589.3|[50811833] gi|34594663|ref|NM\_015597.2|[34594663] gi|34147330|ref|NM\_015600.2|[34147330] gl|39753956|ref|NM\_015602.2|[39753956] gi|31317287|ref|NM\_015604.2|[31317287] gl|45243553|ref[NM\_015605.4|[45243553] gl|31742483|ref|NM\_015608.2|[31742483] gi|24308106|ref|NM\_015609.1|[24308106] gi|30911102|ref|NM 015617,1|[30911102] gil22027529|ref|NM 015627.1|[22027529] gi|24308108|ref|NM 015631.1|[24308108] gi|24308110|ref|NM\_015633.1|[24308110] gi|24308112|ref|NM 015634.1|[24308112]

gil51093831|refINM 015635,2|[51093831]

qil50052856|refINM 015639,1|[50052856] gil24308114|ref|NM 015649.1|[24308114] gil34147336lrefINM 015655.2l[34147336] oil46195722lrefINM 015659.1[[46195722] gil28416430|ref|NM 015660.1|[28416430] 9i|46358427|ref|NM 015662.1|[46358427] gi|31563510|ref|NM 015666,2|[31563510] gi[32698717|ref[NM\_015667,1][32698717] gij24308118|ref|NM\_015668.1|[24308118] gi|46852180|ref|NM\_015687.2|[46852180] gi[34222107|ref|NM\_015690.2|[34222107] gij38570148|ref|NM\_015691.2|[38570148] gij23510326|ref|NM\_015692.1|[23510326] gil44888832|refINM 015693.2|[44888832] gil23821012|refINM 015694.1|[23821012] gil42544135|ref|NM 015713.3|[42544135] gi|48675815|ref|NM\_015723.2|[48675815] gij47419910|ref|NM 015905.2|[47419910] gij28558968|ref|NM\_015979.2|[28558968] gi|31317232|ref|NM\_016105.2|[31317232] gil38327532|ref|NM 016133.2|[38327532] gil21264364|ref|NM 016320.2|[21264364] gil23821014|ref|NM 016544.1|[23821014] gil31442760irefiNM 017419.1[[31442760] gil34101287 ref NM 017437.1 [34101287] gl|34222109|ref|NM\_017440.2|[34222109] gi|39725635|ref|NM 017510.3|[39725635] gi[39930370]ref[NM\_017516.1][39930370] g||40068465|ref|NM 017519.1|[40068465] g||41055988|ref|NM\_017520.2|[41055988] gil50878264lrefINM 017525.1[[50878264] all40068041lrefINM 017527,21[40068041] gil24308168lrefINM 017539.1[[24308168] gil24475585|ref|NM 017549.1|[24475585] gil45267838|ref|NM 017550.1|[45267838] gil38708320|ref|NM 017553.1|[38708320] g||50512291|ref|NM 017554.1||50512291| gi|30794491|ref|NM 017556.1|[30794491] g||24308146|ref|NM\_017563.1||24308146| gi|42476034|ref|NM\_017565.2|[42476034] gi|48314819|ref|NM\_017570.1|[48314819] gi|40316916|ref|NM\_017573.2|[40316916] gl[30794487]ref[NM\_017576.1][30794487] gil23943913lrefINM 017580.1[[23943913] gil40353201lrefINM 017602.2l[40353201] gil40556377[ref]NM 017619.2[[40556377] gij40254897[ref]NM 017628.2[[40254897] gi|38569483|ref|NM 017641.2|[38569483] gi|42476026|ref|NM\_017666.2|[42476026] gi|29893551|ref|NM\_017672.2|[29893551] gi|33356553|ref|NM\_017725.1|[33356553] gij46519146|ref|NM\_017747.1|[46519146] gij33350929|ref|NM\_017754.2|[33350929] gij40353209|ref|NM\_017758.2|[40353209] gil31543451[ref[NM 017771.2][31543451] gi|50811884|ref|NM 017804.3|[50811884] gi|23680884|ref|NM 017861.1|[23680884]

gi|39725639|ref|NM 017871,3|[39725639] gi|33859677|ref|NM 017879.1|[33859677] 9i|24308176|ref|NM 017969.1|[24308176] 9il46519150|ref|NM 017978,1|[46519150] 9i|24308154|ref|NM 018003.1|[24308154] 9||50811886|ref|NM\_018069.2|[50811886] 9i|22547233|ref|NM\_018117.10|[22547233] 9i|47059117|ref|NM\_018151.1|[47059117] 9i|31742491|ref|NM\_018177.2|[31742491] gi|42734338|ref|NM\_018193.1|[42734338] 9||41055952|ref|NM\_018218.1||41055952| gi|46852387|ref|NM\_018237.2|[46852387] 9il24308156|ref|NM 018284,1|I243081561 gi|37039611|ref|NM 018325,1|[37039611] gi|37059785|ref|NM 018334,3|[37059785] 9I|23510330|ref|NM\_018369,1|[23510330] gi|38016155|ref|NM\_018392.3|[38016155] gi|27501455|ref|NM\_018397.1|[27501455] gi|24475639|ref|NM\_018405,2||24475639| gi|21359927|ref|NM\_018414.2|[21359927] gi|24308160|ref|NM\_018420.1|[24308160] gi|29893546|ref|NM\_018424.1|[29893546] gi|21281668|ref|NM\_018429.1|[21281668] gl|27544938|ref|NM 018462,3|[27544938] gi|21314681|ref|NM\_018646.2|[21314681] gi|38638697|ref|NM\_018689.1|[38638697] gij38683863|ref|NM\_018703.3|[38683863] gi|24308178|ref|NM\_018704,1|[24308178] gi|24308162|ref|NM\_018708.1|[24308162] gi|24308164|ref|NM\_018710.1|[24308164] gi|24308166|ref|NM\_018711.1|[24308166] gij34222111|ref|NM 018712,2|[34222111] gi|21237782|ref|NM 018714.1|[21237782] gl|29789089|ref|NM 018715.1|[29789089] gli38158014|ref|NM\_018717.2|[38158014] gl|38327656|ref|NM 018837.2|[38327656] gi|24308180|ref|NM\_018847.1|[24308180] gi|24308126|ref|NM\_018981.1|[24308126] gi|39930366|ref|NM\_018987.1|[39930366] gij30749199|ref|NM\_018998.2|[30749199] gil24308130|refINM\_018999.1|[24308130] gi|40254886|ref|NM 019001.2|[40254886] gi|34147334|ref|NM\_019007.2|[34147334] gi|27894336|ref|NM\_019010.1|[27894336] gi|48717494|ref|NM\_019015,1|[48717494] gil38505221|ref|NM\_019022.3|[38505221] gi|24308132|ref|NM\_019026.1|[24308132] gi|22027515|ref|NM\_019029.1|[22027515] 9i|26553431|ref|NM\_019030.1|[26553431] gi|38016903|ref|NM\_019032.2|[38016903] gi|46195724|ref|NM 019036.1|[46195724] gi|21265095|ref|NM 019051.1|[21265095] 9i|30410709|ref|NM 019053.2|[30410709] 9i|17511434|ref|NM 019055.4|[17511434] gi|32129213|ref|NM\_019065.2|[32129213] 9i|24308140|ref|NM\_019072.1|[24308140] 9i|45827761|ref|NM\_019075.2|[45827761]

gi|41282212|ref|NM 019077.2|[41282212] gi|46249403|ref|NM\_019078.1|[46249403] gi|42734336|ref|NM\_019085.1|[42734336] gi[39930376]ref[NM\_019092.1][39930376] gi|28144915|ref|NM\_019104.1|[28144915] gil50052804|ref|NM 019107,2|I50052804| gil50843819|ref|NM 019590.2|[50843819] gi|34222113|ref|NM 019593,2|[34222113] gi|39930378|ref|NM 019594,1|[39930378] gi|29789101|ref|NM 019850,1|[29789101] gi|39930382|ref|NM 020063,1|[39930382] gi|34222114|ref|NM\_020116.2|[34222114] gij23110975|ref|NM 020124.1|[23110975] gi|24308184|ref|NM 020170.1|[24308184] gi[20514779]ref[NM\_020172,1][20514779] gi|24308186|ref|NM\_020175.1|[24308186] gi[21281666]ref[NM\_020192.1][21281666] gl/33569215/ref/NM 020204.21/335692151 gl|39930392|ref|NM 020207.1|[39930392] gi|42476327|ref|NM 020209,2|[42476327] gl|39777607|ref|NM 020210.2|[39777607] gi|24308188|ref|NM\_020211.1|[24308188] gi|40556360|ref|NM 020212.1|[40556360] gl|19482155|ref|NM\_020214.1|[19482155] gl|45267816|ref|NM\_020219.2|[45267816] gi|32698727|ref|NM\_020223.1|[32698727] gl[31083343]ref[NM\_020311.1][31083343] gi|40789232|ref|NM\_020312.1|[40789232] gil23097298|ref|NM 020318,1|[23097298] gil28461128/refINM 020319.1/[28461128] gi|24475643|ref|NM 020320.2|[24475643] gl|34787408|ref|NM 020336.1|[34787408] gi|50234887|ref|NM\_020338,2|[50234887] gij38569486|ref|NM\_020340.2|[38569486] gi|29826330|ref|NM\_020341.2|[29826330] gi|34147340|ref|NM\_020376.2|[34147340] gi[34147337|ref|NM\_020378.2|[34147337] gil21359928|ref|NM 020383,2|[21359928] gil29826286frefINM 020409.2ff298262861 gi|32967587|ref|NM\_020416.2|[32967587] gi|31652229|ref|NM 020417.1|[31652229] gil32698733[ref|NM 020420.1][32698733] gij31317291jreflNM 020429.1j/313172911 gi|40254932|ref|NM\_020432.2|[40254932] gil48976059|ref|NM\_020438.3|[48976059] gil41152505lreflNM 020440.2l[41152505] gi|40353202|ref|NM\_020447.2|[40353202] gi|47578098|ref|NM\_020451.2|[47578098] gil40316836|ref|NM 020452,1|[40316836] gil28466988|ref|NM 020453,2|[28466988] gi|37620168|ref|NM 020455.3|[37620168] gi|20531764|ref|NM 020456.1|[20531764] gi|40354196|ref|NM 020457.2|[40354196] gi|24308198|ref|NM\_020462.1|[24308198] gi[39930396|ref[NM\_020463.1|[39930396] gi|39777615|ref|NM\_020468.2|[39777615] gil41327713|refINM 020531,2|J413277131

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gi|47519458|ref|NM\_020532.4|[47519458] gi|29570789|ref|NM\_020536.2|[29570789] gl|25952130|ref|NM\_020546.1|[25952130] gi|38373681|ref|NM 020631,2|[38373681] gi|21735574|ref|NM\_020647.1|[21735574] gi|21359934|ref|NM 020693,2|[21359934] gi|37655180|ref|NM\_020695.2|[37655180] gi|33468964|ref|NM\_020696.1|[33468964] gi|45433545|ref|NM\_020697.2|[45433545] gi|29789109|ref|NM\_020698.1|[29789109] gi|21218437|ref|NM\_020699.1|[21218437] gi|20149303|ref|NM\_020701.1|[20149303] gi|50950116|ref|NM\_020702.1|[50950116] gi|40789228|ref|NM\_020706.1|[40789228] gi|24308206|ref|NM\_020710.1|[24308206] gi|34013527|ref|NM\_020713.1|[34013527] gi|29789111|ref|NM\_020714.1|[29789111] gl|42415502|ref|NM 020718.2|[42415502] gl|45387944|ref|NM 020728.1|[45387944] gi|40068463|ref|NM 020732,2|[40068463] gl|31621295|ref|NM\_020739.1|(31621295) gl|31317251|ref|NM\_020740.1|[31317251] gi|31317257|ref|NM\_020742.2|[31317257] gi|50878291|ref|NM\_020744.2|[50878291] gi|38569416|ref|NM\_020745.1|[38569416] gi|42734342|ref|NM\_020746.1|[42734342] gi|24308210|refINM 020748.1|[24308210] gi|22748936|ref|NM 020750.1|[22748936] gi|33457343|ref|NM 020751.1|[33457343] gi|47059124|ref|NM 020752,1|[47059124] gi|45433546|ref|NM 020753.2|[45433546] gi|34222115|ref|NM\_020755.2|[34222115] gli22094986|ref|NM\_020761.1|[22094986] gi|44917603|ref|NM\_020762.1|[44917603] gi|24416001|ref|NM\_020765.1|[24416001] gi|24308214|refINM 020769.1|[24308214] gl|34222116|ref|NM 020771,2|[34222116] gi|32698729|ref|NM\_020772.1|[32698729] gi|29789113|ref|NM 020773,1|J297891131 gi|30348953|ref|NM\_020774.1|[30348953] gl|38569481|ref|NM\_020775,2|[38569481] gi|24308216|ref|NM\_020778,1|[24308216] gi|34222117|ref|NM\_020779.2|[34222117] gi|25777702|ref|NM 020781.2|[25777702] gi|34222118|ref|NM 020783.2|[34222118] gi|41349496|ref|NM\_020786.1|[41349496] gi|47271359|ref|NM 020787.1|[47271359] gi|34147342|ref|NM 020789,2|[34147342] gi|45439369|ref|NM 020791.1|[45439369] gi|46048175|ref|NM\_020792.2|[46048175] gi[31317254|ref|NM\_020795.2|[31317254] gi|33147079|ref|NM\_020799.1|[33147079] gil46409656lreflNM 020800.1[[46409656] gi|32698735|ref|NM\_020801.1|[32698735] gi|34101267|ref|NM 020803.3|[34101267] gi|47834327|ref|NM 020804.2|[47834327] gi|45237199|ref|NM\_020808.1|[45237199]

gi|45433494|ref|NM\_020809.1|[45433494] gi|50845423|ref|NM\_020810.1|[50845423] gil40217610lrefINM 020812.1lf402176101 gli32698737|reflNM 020813.1|[32698737] gi|40385863|ref|NM 020816,1|[40385863] gil24308222|ref|NM 020817.1|[24308222] gil40068514|ref|NM 020818.1][40068514] gi|34452731|ref|NM 020820.2|[34452731] gi|50345878|ref|NM 020824.2|[50345878] gi|46195728|ref|NM 020825.1|[46195728] gi|24308232|ref|NM\_020826.1|[24308232] gi|22094124|ref|NM\_020828.1|[22094124] gi|24308226|ref|NM\_020832.1|[24308226] gi|29789117|ref|NM\_020834.1|[29789117] gil21314694lrefINM 020839,2[[21314694] gil45237201|ref|NM 020844,1|[45237201] gil24308236|ref|NM 020845,1|[24308236] gil21702732|refINM 020847,1|[21702732] gil40538735|ref|NM 020850.1|[40538735] gil39930400|ref|NM 020851.1|[39930400] gil24475647[ref]NM 020854.2[[24475647] gi|24308230|ref|NM 020856.1|[24308230] gi[24234728|ref|NM\_020858.1|[24234728] gi|18699721|ref[NM\_020859.1|[18699721] gij21070998[ref[NM\_020860.1][21070998] gl[24308240]ref[NM\_020861.1[[24308240]] gij46487910|ref|NM\_020863.2|[46487910] gi|22325365|ref|NM\_020867.1|[22325365] g||24308234|ref|NM\_020868.1|[24308234] gi|32698739|ref|NM 020870.1|[32698739] gl|40068043|ref|NM\_020871.2|[40068043] gi|34222384|ref|NM 020873.3|[34222384] gil45827745 ref|NM\_020875.1 [45827745] gli40254939/refINM\_020880.2[[40254939] gl|44917609|ref|NM\_020882.1|[44917609] gi|30842828|ref|NM\_020889.1|[30842828] gil24308238|refINM\_020890.1|[24308238] gli24308252|ref|NM 020892,1|[24308252] gi|34147343|ref|NM 020895,2|[34147343] gil38327036|ref|NM 020897,1|[38327036] all34222119|ref|NM 020899.2|[34222119] gl|50233871|ref|NM\_020914.2|[50233871] g||40254942|ref|NM\_020918.2|[40254942] gi|50845417|ref|NM\_020922.2|[50845417] gi[32698741]ref[NM\_020925.1][32698741] gij21071035[ref[NM\_020926.2][21071035] gi|24308256|ref|NM\_020927,1|[24308256] gil20143481|ref|NM 020932,1|[20143481] gi|32698743|ref|NM 020935.1|[32698743] gll41327778|ref|NM 020936.1|[41327778] gil25141322[ref]NM 020939.1[[25141322]] gi|27413907|ref|NM 020944.2|[27413907] gi|38327643|ref|NM\_020947.2|[38327643] gi|24308260|ref|NM\_020948.1|[24308260] gi|24308254|ref|NM\_020951.1|[24308254] gil45935356lreflNM 020952.2l[45935356] gi|39930394|ref|NM 020954.1|[39930394]

gi[34147341|ref|NM\_020961.2|[34147341] gil19882240|refINM 020962,1|[19882240] gil46195732|refINM 020964,1|[46195732] gil29568112|ref|NM 020965.2|[29568112] gil42734346|ref|NM 020970.1|[42734346] gi|40353203|ref|NM 020971.1|[40353203] gil48949814|ref[NM 021006.4|[48949814] gi|34304116|ref|NM 021009.2|[34304116] gi|28626520|ref|NM 021035.1|[28626520] gi|23346635|ref|NM 021044.2|[23346635] gi|32698747|ref|NM\_021045.1|[32698747] gi|31742502|ref|NM\_021059.2|[31742502] gil45387946|refINM 021061.1|[45387946] gil32698745|refINM 021072.1|[32698745] gil20304090|refINM 021088.1|[20304090] gi|33438574|ref|NM\_021089.1|[33438574] gi|31083192|ref|NM\_021116.1|[31083192] gi|29789121|ref|NM\_021117.1|[29789121] gij33667024[ref|NM\_021143.1][33667024] gi|40538737|ref|NM 021148.1|[40538737] gi|23510452|ref|NM\_021149.2|[23510452] gi|33469959|ref|NM\_021164.2|[33469959] gi|23943865|ref|NM\_021165.1|[23943865] gli38049006lrefINM 021180,2l[38049006] gli39930398lrefINM 021202.11[39930398] gi|33438585|ref|NM\_021217.1|[33438585] gi|24308268|ref|NM\_021218.1|[24308268] gl|24308262|ref|NM\_021222.1|[24308262] gi|31377724|ref|NM\_021224.2|[31377724] gi|40548405|ref|NM\_021227.2|[40548405] gl|32698749|ref|NM\_021228.1|[32698749] gi|46370091|ref|NM\_021237.3|[46370091] gli32895366irefiNM 021250.2lf328953661 gli30795179lrefINM 021260.1[[30795179] gli39930402irefINM 021636.1[[39930402] gli48675828|refINM 021649.3|[48675828] gil41281598irefINM 021652.1[[41281598] gil50512285|ref|NM 021915.1|[50512285] all31340618|ref|NM 021916.2|[31340618] gl|23097300|ref|NM 021936.1|[23097300] gij39725642|ref|NM 021937.2|[39725642] gij21630256[ref]NM\_022045.2[[21630256] gl[32455257]ref[NM\_022075.2][32455257] gl|44917605|ref|NM\_022080.1|[44917605] gi|42794774|ref|NM\_022085.3|[42794774] gi|27501457|ref|NM\_022092.1|[27501457] gl[32698751]refINM 022106.1[[32698751] gil46048067 refINM 022115.2 [46048067] gil24308276|ref|NM 022138,1|[24308276] gi|46195736|ref|NM\_022160.1|[46195736] gi[28269692|ref[NM\_022166.1][28269692] gi|31377716|ref|NM\_022351.2|[31377716] gi|20143972|ref|NM\_022475.1|[20143972] gil32880205|refINM 022478.2|[32880205] gil22538494|refINM 022479.1|[22538494] gil48093064|refINM 022486.3|[48093064] gi|42734348|ref|NM 022491.1|[42734348]

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gi|39725643|ref|NM 022572.2|f397256431 gi|23943871|ref|NM 022733.1|[23943871] gi|32171243|ref|NM 022742,2|[32171243] gi|48976052|ref|NM 022745,2|[48976052] gi|40255224|ref|NM\_022757.3|[40255224] gi|45238579|ref|NM\_022824.1|[45238579] gi|51093862|ref|NM\_022833.2|[51093862] gi|45237196|ref|NM\_022835.1|[45237196] ail28875781|ref[NM\_022913.1|[28875781] aii30794471|ref|NM\_023002.1|[30794471] ail20302140|ref|NM 023006.1|[20302140] gil50897299|ref|NM\_023939.3|[50897299] gil45387950|ref|NM 023943,1|[45387950] gi|36054140|ref|NM 024007,2|[36054140] gi[31340581]ref[NM\_024019.2][31340581] gi|37674208|ref|NM\_024100.2|[37674208] gi|24308288|ref|NM\_024316.1|[24308288] gi|42544240|ref|NM\_024335.2|[42544240] gi[39930458|ref|NM 024336,1|[39930458] gl|25121937|ref|NM\_024342.1|[25121937] ali27765071|ref|NM\_024344.1|[27765071] gi|23943919|ref|NM\_024420.1|[23943919] gi|24308296|ref|NM\_024493.1|[24308296] gl[38327635]ref[NM 024496,2][38327635] gli39725710|ref|NM 024511.3|[39725710] gi[24797090|ref[NM 024517,1][24797090] gi|33469927|ref|NM\_024553,2|[33469927] gl|22003857|ref|NM\_024621.1|[22003857] gi|27477137|ref|NM\_024625.3|[27477137 gl|34328078|ref|NM\_024684.2|[34328078] gij28875783|ref|NM\_024742.1|[28875783] gl[41393588|ref|NM\_024769.2|[41393588] gi|47578114|ref|NM 024870,2|[47578114] gij39653320|ref|NM 024878.1|[39653320] gi|46358069|ref|NM\_024933.2|[46358069] gi|38679913|ref|NM\_024953,2|[38679913] gi[47716684]ref[NM\_025169.1][47716684] gi|37059725|ref|NM\_025196,2|[37059725] gi|34147386|refiNM 025202.2|[34147386] gi|45504381|ref|NM\_025219.1|[45504381] gl|47679079|ref|NM\_025224.1|[47679079] gi[45592956|ref|NM 025248.1|[45592956] gi|47132517|ref|NM\_025252.3|[47132517] gi|18426878|ref|NM 025256,4|[18426878] gi|33859754|ref|NM\_030625,1|[33859754] gi|32698754|ref|NM\_030627.1|[32698754] gi[44771200|ref|NM\_030628.1|[44771200] gi|29789254|ref|NM\_030629.1|[29789254] gi|29825822|ref|NM\_030630.1|[29825822] gi[30794213]ref[NM\_030633.1][30794213] gi[24308298]ref[NM\_030634.1][24308298] gi|24308300|ref|NM 030636,1|[24308300] gi[45120112|ref|NM 030637.1|[45120112] gi|39930462|ref|NM\_030639.1|[39930462] gi[38372910]ref[NM\_030640.1][38372910] gi[22035641|ref[NM\_030644.1][22035641] gi|24308302|ref[NM\_030645.1|[24308302]

gil38176150lrefINM 030650.1[[38176150]] gil30581114|ref|NM 030789.2|[30581114] gil32698756|ref|NM 030812.1|[32698756] gil34222273|ref|NM 030883,3|[34222273] gil44890053|ref|NM 030906.2|[44890053] gil24308304|ref|NM 030919.1|[24308304] gil42476171|refINM 030922.3|[42476171] gi|34222122|ref|NM 030923.2|[34222122] gi|19311005|ref|NM 030949.1|[19311005] gi|21265024|ref|NM 030957.1|[21265024] gi|30794215|ref|NM\_030961.1|[30794215] gi|29788754|ref|NM\_030962.1|[29788754] gi|49065663|ref|NM\_031303,1|[49065663] gil50845406|ref|NM 031444.2|[50845406] gil34147398|ref|NM 031448.2|[34147398] gi[32880228]ref[NM\_031454.1[[32880228] gij24308313jrefiNM 031467.1[[24308313] ali31377666[refINM 031490.2][31377666] gi|23510324|ref|NM 031888.1|[23510324] gl|24586685|ref|NM\_031895.4|[24586685] gi|40549456|ref|NM\_031912.3|[40549456] gi|46195742|ref|NM\_031913.1|[46195742] gi|32698758|ref|NM 031914.1|[32698758] gli31083305lrefINM 031935.1[[31083305] gi|31543197|ref|NM 032017.1|[31543197] gij21265074|ref|NM\_032111.1|[21265074] gi|19882212|ref|NM\_032119.1|[19882212] gii40353745|ref|NM 032123,4|[40353745] gi|31542506|ref|NM\_032132.2|[31542506] gl|31542516|ref|NM 032137.2|[31542516] gi|50428930|ref|NM\_032156.2|[50428930] gil23943786lrefINM 032160.1[[23943786]] gll50083284lrefINM 032165,2lf500832841 gl|29789282|ref|NM\_032168.1|[29789282] gil39930468irefINM 032194.1[39930468] gil21040313lreflNM 032195,1[[21040313] ali38683806|ref|NM 032217.3|[38683806] gil39752638|ref|NM 032222,1|[39752638] gij24308321 ref|NM 032226.1 [24308321] gi|50582992|ref|NM\_032228.4|[50582992] gl[39930470]ref[NM\_032230.1][39930470] gl|46195744|ref|NM\_032279.1|[46195744] gi|42734355|ref|NM\_032282.1|[42734355] gi|45433498|ref|NM\_032283.1|[45433498] gi|23943879|ref|NM\_032285.1|[23943879] gll49227853 refINM 032286.2 [49227853] gil29789276|ref|NM 032422.1|[29789276] gil46410932|ref|NM 032423.2|[46410932] gil46391093|ref|NM 032425.3|[46391093] gi|33286443|ref|NM 032427.1|[33286443] gi|45331214|ref|NM 032429.1|[45331214] gi[24308325|ref|NM 032430.1|[24308325] gi|27436924|ref|NM\_032431.1|[27436924] gi|40316949|ref|NM\_032432.2|[40316949] gi|20336723|ref|NM\_032433.1|[20336723] gil40217789|ref|NM 032434.2|[40217789] gil24308329|ref|NM 032435.1|[24308329]

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gi|41281611|ref|NM 032436.1|[41281611] gi|33469020|ref|NM\_032439.1|[33469020] gi|39930472|ref|NM\_032440.1|[39930472] gi|24308331|ref|NM\_032444.1|[24308331] gi|24308333|ref|NM\_032448.1|[24308333] gi|33859758|ref|NM\_032452.1|[33859758] gi|28557676|ref|NM 032458.1|[28557676] gi|21265092|ref|NM 032477,1|[21265092] gi|26667164|ref|NM\_032478.2|[26667164] gi|21265087|ref|NM\_032479.2|[21265087] gi|22094134|ref|NM 032482,1|[22094134] gi|23618925|ref|NM 032497.1|[23618925] gi|28416952|ref|NM\_032501.2|[28416952] gi|21245131|ref|NM\_032505.1|[21245131] gi|47575698|ref|NM\_032506.1|[47575698] gi|22296883|ref|NM\_032508.1|[22296883] gi|24308335|ref|NM\_032511.1|[24308335] gi|46559760|ref|NM\_032512.2|[46559760] gi|37059771|ref|NM\_032517.3|[37059771] gi|26190609|ref|NM 032528.1|[26190609] gi|26006460|ref|NM 032531,1|[26006460] gi|19387853|ref|NM\_032536.1|[19387853] gi|40217818|ref|NM 032539.2|[40217818] gi|50897838|ref|NM\_032550.2|[50897838] gl|20070108|ref|NM\_032552.1|[20070108] gi|40556375|ref|NM\_032569.2|[40556375] gi|46852144|ref|NM\_032590.2|[46852144] gi|29826313|ref|NM 032636,4|[29826313] gi|31377641|ref|NM 032869,2|[31377641] gi|18699723|ref|NM 032870.1|[18699723] gil40805107|ref|NM 032947,3|[40805107] gi|50726961|ref|NM 033026.2||507269611 gi|19526470|ref|NM 033046.1|[19526470] gl|24308341|ref|NM\_033052.1|[24308341] gi[33438589]ref[NM\_033053.1][33438589] gi|39753964|ref|NM\_033055.2|[39753964] gi|48375172|ref|NM\_033063.1|[48375172] gl|29336042|refINM 033064.1|[29336042] gi|24308351|ref|NM\_033067.1|[24308351] gi|23097307|ref|NM\_033071.1|[23097307] gi|32129198|ref|NM 033082.1|[32129198] ali32698764[ref]NM\_033086.1[[32698764] gi|42734359|ref|NM 033088,1|[42734359] gi|23397643|ref|NM\_033090.1|[23397643] gi|24308345|refINM\_033107.1|[24308345] gil33695110lrefINM 033109.2lf336951101 gi|24308349|ref|NM\_033112.1|[24308349] gi|38683798|ref|NM\_033121.1|[38683798] gi|46430490|ref|NM 033129.1|[46430490] gi|50582976|ref|NM 033141,1|[50582976] gi|42822888|ref|NM 033160.3|[42822888] ail19593984[ref]NM\_033161.2[[19593984] qi|24308355|ref|NM\_033200.1|[24308355] gi|24308353|ref|NM\_033201.1|[24308353] gi|45331210|ref|NM\_033206.1|[45331210] gil50593107lreflNM 033253,2lf505931071 gi|39930474|ref|NM 033267,1|[39930474]

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gi|30794221|ref|NM\_033271.1|[30794221] gi|32698766|ref|NM\_033276.1|[32698766] gi|38788287|ref|NM\_033288.2|[38788287] gi|38569418|ref|NM\_033364.2|[38569418] gi|46485767|ref|NM\_033375.3|[46485767] gil31324576[ref]NM 033386.1[[31324576] gil34222124|ref|NM 033387.2|[34222124] gil37674209lreflNM 033389.2|[37674209] gil41350322[ref]NM 033392.3[[41350322] gil49472816|ref|NM 033393.1|[49472816] gi|20270211|ref|NM\_033396.1|[20270211] gi|47271452|ref|NM 033397.2|[47271452] gij47604913|ref|NM 033402.2|[47604913] gi|46243679|ref|NM\_033404.2|[46243679] gi|34335259|ref|NM\_033405.2|[34335259] gi|42734361|ref|NM\_033407.1|[42734361] gij39930478|ref|NM\_033425.1|[39930478] gij32307174|ref|NM\_033426.2|[32307174] gij46195750|ref|NM\_033429.1|[46195750] gl|28875785|ref|NM\_033449.1|[28875785] gl[25914748|ref|NM 033450.2|[25914748] gi|33457333|ref|NM\_033452.1|[33457333] gl|50083288|ref|NM\_033505.1|[50083288] gl|25121979|ref|NM\_033510.1|[25121979] gi|49410494|ref|NM\_033512.2|[49410494] gl|46195752|ref|NM\_033513.1|[46195752] gi|41281602|ref|NM\_033520.1|[41281602] gi|23618847|ref|NM\_033542.1|[23618847] gij24308361|ref|NM\_033548.1|[24308361] gij38176148[ref]NM\_033553.2[[38176148] gi|24308363|ref|NM 033557.1|[24308363] gi|19924142|ref|NM\_033631.1|[19924142] gli32455235|ref|NM 033647.2|[32455235] gil 19743814 refINM 033666.1 [19743814] gi|19743816|ref|NM\_033667.1|[19743816] gi|19743818|ref|NM\_033668.1|[19743818] gi|19743820|ref|NM\_033669.1|[19743820] gl|40255313|ref|NM\_052843.1|[40255313] gil45433500|ref|NM 052846.1|[45433500] gi|32698768|ref|NM\_052847.1|[32698768] gi[33086946]ref[NM\_052849.2][33086946] gil31543414|ref|NM 052850.2|[31543414] gil49472813[ref|NM 052857.2][49472813] gl|38202233|ref|NM\_052864.2|[38202233] gi|24119273|ref|NM\_052867.1|[24119273] gij39930482|ref|NM\_052878.1|[39930482] gi[33598941]ref[NM\_052892.2][33598941] gil38045884lrefINM 052896.2l[38045884] gi|46852160|ref|NM\_052897.3|[46852160] gil32698770lrefINM 052899.1[[32698770] gil38045885[refINM 052900.2][38045885] gil39930484|ref|NM 052901.1|[39930484] gil24308375[ref]NM 052902.1[[24308375] gil48976055[ref[NM 052903.2][48976055] gi|24308379|ref|NM\_052904.1|[24308379] gi|38524617|ref|NM\_052905.1|[38524617] gi|42734363|ref|NM\_052909.1|[42734363]

gi|40217816|ref|NM 052910.1|[40217816] gi|40804767|ref|NM 052911.1|[40804767] gi|40538800|ref|NM\_052913.2|[40538800] gi|42741666|ref|NM\_052917.1|[42741666] gi|46195754|ref|NM\_052923.1|[46195754] gi|19882236|ref|NM\_052924.1|[19882236] gi|24308381|ref|NM 052925.1|[24308381] gi[24308383|ref[NM 052926.1|[24308383] gi|46195756|ref|NM\_052928.1|[46195756] gi|24308385|ref|NM\_052937.1|[24308385] gi|42734365|ref|NM 052964.1|[42734365] gi|24308389|ref|NM\_052965.1|[24308389] gil29789284|ref|NM 053041.1|[29789284] gi|24475740|ref|NM\_053044.2|[24475740] gi|29789292|ref|NM\_053051.1|[29789292] gi|26024192|ref|NM\_053052.2|[26024192] gi|27894377|ref|NM\_053277.1|[27894377] gl|32698772|ref|NM\_053279.1|[32698772] gi|24308411|ref|NM 053282.1|[24308411] gi|50080212|ref|NM 054104.1|[50080212] gi|50080218|ref|NM 054105.1|[50080218] gi|46370074|ref|NM 057163.2|[46370074] gi|24308387|ref|NM\_058163.1|[24308387] gi|19718730|ref|NM\_058243.1|[19718730] gi|46309852|ref|NM\_080574.2|[46309852] gl|32307108|ref|NM\_080614.1|[32307108] gi|29570784|ref|NM\_080618.2|[29570784] gi|49574583|ref|NM\_080622.2|[49574583] gi|22129777|ref|NM\_080725.1|[22129777 gi|28372502|ref|NM 080747.1|[28372502] gi|20304092|ref|NM 080751.1|[20304092] gi|31563538|ref|NM\_080753.2|[31563538] gi|50233782|ref|NM\_080757.1|[50233782] gi|38202248|ref|NM\_080764.2|[38202248] gl[22779935|ref|NM\_080827.1|[22779935] gi|24308393|ref|NM\_080833.1|[24308393] gi|38327559|ref|NM\_080836.2|[38327559] gi|34878895|ref|NM 080865,2|[34878895] gl|42542385|ref|NM\_080866.2|[42542385] gi|27477048|ref|NM\_080868.1|[27477048] gi|20069857|ref|NM\_080869.1|[20069857] gi|21264329|ref|NM\_080875.1|[21264329] gi|25014087|ref|NM 080877.1|i25014087| ail19718750|ref|NM\_080911.1|[19718750] gi|38261966|ref|NM\_080928.2|[38261966] all18765749lrefINM 101395.11[18765749] gl|18860889|ref|NM\_130391.1|[18860889] gi|18860891|ref|NM\_130392.1|[18860891] gi|18860893|ref|NM\_130393.1|[18860893] gi|40805848|ref|NM 130435,2|[40805848] gl|18765751|ref|NM 130436.1|[18765751] gi|18765753|ref|NM 130437.1|[18765753] gi|18765755|ref|NM\_130438.1|[18765755] gi|18860895|ref|NM\_130440.1|[18860895] gi|18765701|ref|NM\_130442.1|[18765701] gil18765745[ref[NM 130444.1][18765745] gi|18765747|ref|NM 130445,1|[18765747]

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gi|50511933|ref|NM 130465.2|[50511933] gi|35493958|ref|NM 130466.2|[35493958] gi|18860861|ref|NM\_130470.1|[18860861] gi|18860863|ref|NM\_130471.1|[18860863] gi|18860865|ref|NM\_130472.1|[18860865] gi|18860867|ref|NM\_130473.1|[18860867] gi|18860869|ref|NM\_130474.1|[18860869] ail18860872|ref|NM\_130475.1|[18860872] gi|18860874|ref|NM 130476.1|[18860874] gi|18780276|ref|NM\_130760.1|[18780276] gi|18780280|ref|NM 130761,1|[18780280] gil18780284|ref|NM 130762,1|[18780284] gi|18765706|ref|NM\_130766.1|[18765706] gi|45580712|ref|NM\_130771.2|[45580712] gi|19747272|ref|NM\_130775,1|[19747272] gi|19747268|ref|NM\_130776.1|[19747268] gi|19747282|ref|NM\_130777.1|[19747282] gi|18860879|ref|NM 130788.1|[18860879] gi|18860881|ref|NM\_130790.1|[18860881] gl|18860883|ref|NM\_130791.1|[18860883] gi|18860885|ref|NM\_130792.1|[18860885] gi|39777588|ref|NM\_130793.3|[39777588] gi|19882248|ref|NM\_130794.1|[19882248] gl|18765697|ref|NM 130797.1|[18765697] gi|18765730|ref|NM\_130798.1|[18765730] gl|18860846|ref|NM\_130799.1|[18860846] gi|18860848|ref|NM\_130800.1|[18860848] gl|18860850|ref|NM\_130801.1|[18860850] gi|18860852|ref|NM\_130802.1|[18860852] gi|18860854|ref|NM\_130803.1|[18860854] gi|18860856|ref|NM 130804,1|[18860856] gl|20070357|ref|NM 130806,2|[20070357] gi|40018625|ref|NM\_130807.2|[40018625] gi|18677732|ref|NM\_130808.1|[18677732] gi|31377624|ref|NM\_130809.2|[31377624] gi|18677736|ref|NM\_130810.1|[18677736] gi[18765734]ref[NM\_130811.1][18765734] gil40255007lreflNM 130830.2l[40255007] gil18860830|ref|NM 130831.1|[18860830] gi|18860832|ref|NM 130832,1|[18860832] gl|18860834|ref|NM 130833,1|[18860834] gi|18860836|ref|NM 130834,1|[18860836] gi|18860840|ref|NM 130835,1|[18860840] gi|18860842|ref|NM\_130836,1|[18860842] gi|18860844|ref|NM\_130837.1|[18860844] gil19718761|ref|NM\_130838.1|[19718761] gi|19718763|ref|NM\_130839.1|[19718763] gi|19913419|ref|NM\_130840.1|[19913419] gi|19913421|ref|NM\_130841.1|[19913421] gil19743911|refINM 130842.1|[19743911] gi|19743913|ref|NM 130843,1|[19743913] gi|18860887|ref|NM 130844.1|[18860887] gl[18860909]ref[NM 130845,1][18860909] gi|19743916|ref|NM\_130846.1|[19743916] gi|22027645|ref|NM\_130847.1|[22027645] gi|18677769|ref|NM\_130848.1|[18677769] gi|19115957|ref|NM 130849,1|[19115957]

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gi|19528649|ref|NM 130850.1|[19528649] gi|19528651|ref|NM 130851.1|[19528651] gi|18765704|ref|NM 130852.1|[18765704] gi|19743920|ref|NM 130853.1|[19743920] gi|19743922|ref|NM 130854.1|[19743922] gi|19743924|ref|NM 130855.1|[19743924] gi|31657106|ref|NM\_130896.1|[31657106] gi|18702322|ref|NM\_130897.1|[18702322] gi[31542090|ref|NM\_130898.2|[31542090] gi|18702326|ref|NM\_130899.1|[18702326] gi|18702328|ref|NM\_130900.1|[18702328] gl|18702330|ref|NM\_130901.1|[18702330] gi|18702332|ref|NM 130902.1|[18702332] gi|19557635|ref|NM 130906.1|[19557635] gi|45238855|ref|NM 131915.2|[45238855] gi|19557639|ref|NM\_131916.1|[19557639] gi|19528654|ref|NM\_131917.1|[19528654] gi|45580714|ref|NM\_133168.2|[45580714] gi|45580715|ref|NM 133169,2|[45580715] gi|48762921|ref|NM\_133170.2|[48762921] g||33469945|ref|NM\_133171.2||33469945| gi|19528658|ref|NM\_133172.1|[19528658] gi|19528660|ref|NM\_133173.1|[19528660] gl|19528662|ref|NM\_133174.1|[19528662] gi|19528664|ref|NM\_133175.1|[19528664] gl|19528666|ref|NM\_133176.1|[19528666] gi|19743930|ref|NM\_133177.1|[19743930] gi|19743932|ref|NM\_133178.1|[19743932] gi|19747270|ref|NM\_133179.1|[19747270] gi|21264607|ref|NM\_133180.1|[21264607] gl|21071015|ref|NM\_133181.2||21071015| gi|31621304|ref|NM\_133259.2||31621304| gi|18959203|ref|NM\_133261.1|[18959203] gi|20357541|ref|NM\_133282,2|[20357541] gi|31543391|ref|NM\_133263,2||315433911 gi|23199980|ref|NM\_133264,2||231999801 gij19111149|ref|NM\_133265.1|[19111149 gi|19743795|ref|NM\_133266.1|[19743795] gi|18959211|ref|NM\_133267.1|[18959211] gi|19718742|ref|NM 133268,1|[19718742] gl|19743856|ref|NM 133269,1|[19743856] gi|19743858|ref|NM\_133271.1|[19743858] gi|19743860|ref|NM\_133272.1|[19743860] gi|19743862|ref|NM 133273.1|[19743862] gi|19743864|ref|NM\_133274,1|[19743864] gil19743866[ref]NM\_133277.1[[19743866] gi|19743868|ref|NM\_133278.1|[19743868] gi|19743870|ref|NM\_133279.1|[19743870] gi|19743872|ref|NM\_133280.1|[19743872] gi|19718798|ref|NM\_133282.1|[19718798] gi|19747275|ref|NM\_133325.1|[19747275] gi|20357543|ref|NM 133326,1|[20357543] gi|19718781|ref|NM 133327.1|[19718781] gi|31377621|ref|NM 133328,2|[31377621] gi|27436991|ref|NM 133329,4|[27436991] gi|19913347|ref|NM\_133330.1|[19913347] gi|19913349|ref|NM\_133331.1|[19913349]

gil19913351|ref|NM 133332.1|[19913351] gil19913353|ref|NM 133333.1|[19913353] gi|19913355|ref|NM 133334.1|[19913355] gi|19913357|ref|NM 133335.1|[19913357] gi|19913360|ref|NM 133336.1|[19913360] gi|19718758|ref|NM 133337.1|[19718758] gi|19718783|ref|NM 133338.1|[19718783] gi|19718785|ref|NM\_133339.1|[19718785] gi|19718787|ref|NM\_133340.1|[19718787] gl|19718789|ref|NM\_133341.1|[19718789] gi|19718791|ref|NM\_133342.1|[19718791] gi|19718793|ref|NM\_133343.1|[19718793] gi|19718795|ref|NM\_133344.1|[19718795] gi|19115959|ref|NM 133367.1|[19115959] gi|45387948|ref|NM 133368.1|[45387948] gi|21166354|ref|NM\_133370.1|[21166354] gi[31377622]ref[NM\_133371.2][31377622] gi|48675819|ref|NM\_133373.2|[48675819] ali34147483|ref|NM\_133375.2|[34147483] gil19743822lreflNM 133376.1l[19743822] gil19718800lrefINM 133377.1[[19718800] all50659087[ref]NM 133378.2[[50659087] gli20143915[ref]NM 133379.1[[20143915] gi|19747278|ref|NM 133430.1|[19747278] gi|19747280|ref|NM\_133431.1|[19747280] gi|20143917|ref|NM\_133432.1|[20143917] gi|47578104|ref|NM\_133433.2|[47578104] ali 19718773 irefINM 133436, 11[19718773] gil20143921lreflNM 133437,1|[20143921] gli19743890lreflNM 133439.1[19743890] gil19263339lrefINM 133443.1[19263339] gil45331216|ref|NM 133444.1|[45331216] gil20143963|ref|NM 133445.1|[20143963] gi|19263342|ref|NM 133446.1|[19263342] gi|42734372|ref|NM\_133448.1|[42734372] gi|42734374|ref|NM\_133450.1|[42734374] gi|33457331|ref|NM\_133452.1|[33457331] gi|50511940|ref|NM\_133455.2|[50511940] gil31442419|ref|NM 133456,1|[31442419] all19263346irefiNM 133457.1[[19263346] gli39930510|ref|NM 133459.1|[39930510] gl|33457329|ref|NM 133462.1|[33457329] gi|28274685|ref|NM 133466.1|[28274685] gi|38455425|ref|NM\_133467.2|[38455425] gi|38327519|ref|NM\_133468.2|[38327519] gi|32698774|ref|NM\_133473.1|[32698774] gi|51036585|ref|NM\_133474.1|[51036585] gil36054193|ref|NM 133476,2|[36054193] gi|19743826|ref|NM\_133478.1|[19743826] gil19743829|ref|NM 133479,1|[19743829] gil19743893|ref|NM 133480.1|[19743893] gil19743895|ref|NM 133481.1|[19743895] gil19924130|ref|NM 133482.1|[19924130] gil19311007|ref|NM 133483.1|[19311007] gi|19743570|ref|NM\_133484.1|[19743570] gi|30315648|ref|NM\_133486.1|[30315648] gi|19924134|ref|NM\_133487.1|[19924134]

gi|19424121|ref|NM\_133489.1|[19424121] gi|27436994|ref|NM 133490,2|[27436994] gi|34147485|ref|NM 133491,2|[34147485] gi|19424127|ref|NM 133492.1|[19424127] gi|19424129|ref|NM 133493.1|[19424129] gi|19424131|ref|NM\_133494.1|[19424131] gi|41529827|ref|NM\_133496.3|[41529827] gi|28329446|ref|NM\_133497.2|[28329446] gi|33563295|ref|NM 133498.2|[33563295] gi|19924096|ref|NM 133499.1|[19924096] gi|19743800|ref|NM\_133502.1|[19743800] gi|47419926|ref|NM\_133503.2|[47419926] gi|47419924|ref|NM\_133504.2|[47419924] gi|47419923|ref|NM\_133505.2|[47419923] gi|47419922|ref|NM 133506,2|[47419922] gi|47419921|ref|NM\_133507.2|[47419921] gi|46255038|ref|NM 133509,2|[46255038] gi|46255037|ref|NM 133510.2|[46255037] gi|46399195|ref|NM 133625.2|[46399195] gi|19924120|ref|NM\_133627.1|[19924120] gil19924122|ref|NM\_133628.1|[19924122] gl|19924124|ref|NM\_133629.1|[19924124] gi|19924126|ref|NM\_133630.1|[19924126] gi|19743805|ref|NM\_133631.1|[19743805] gi|19924106|ref|NM\_133632.1|[19924106] gi|19924108|ref|NM\_133633.1|[19924108] g[|49574586|ref|NM\_133634.2|[49574586] gi|49574587|ref|NM\_133635.3|[49574587] gi|19525732|ref|NM 133636,1|[19525732] gi|19525734|ref|NM 133637.1|[19525734] gl|19525736|ref|NM 133638.1|[19525736] gi|20070359|ref|NM\_133639.2|[20070359] gi|31652219|ref|NM\_133640.3|[31652219] gi|19924140|ref|NM\_133642.1|[19924140] gi|41281652|ref|NM\_133644.1|[41281652] gi|19882216|ref|NM\_133645.1|[19882216] gi|19526766|ref|NM\_133646.1|[19526766] gi|22779931|ref|NM 133650.1|[22779931] ali19913364|ref|NM\_134258.1|[19913364] gi|19913366|ref|NM 134259.1|[19913366] gil19743900|ref|NM\_134260.1|[19743900] gil19743902|ref|NM\_134261.1|[19743902] gl|19743904|ref|NM\_134262.1|[19743904] gll20336276|refINM 134263.1|[20336276] gil20143909|ref|NM 134264.1|[20143909] gi|20143911|ref|NM 134265,1|[20143911] gi|20336281|ref|NM 134266.1|[20336281] gi|38454323|ref|NM 134268.3|[38454323] gi|19913395|ref|NM\_134269.1|[19913395] all19913397|ref|NM\_134270.1|[19913397] ail19743839|ref|NM\_134323.1|[19743839] gi|19743841|ref|NM\_134324.1|[19743841] gi|20336287|ref|NM\_134325.1|[20336287] gi|19913442|ref|NM\_134421.1|[19913442] gi|20143953|ref|NM 134422,1|[20143953] gi|20143955|ref|NM 134423.1|[20143955] gi|20143957|ref|NM 134424.1|[20143957]

gi|20336273|ref|NM\_134425.1|[20336273] gi|20336278|ref|NM\_134426.1|[20336278] gi|19913391|ref|NM\_134427.1|[19913391] gi|19743883|ref|NM 134428.1|[19743883] gi|19913402|ref|NM 134431,1|[19913402] gi|19743878|ref|NM 134433,1|[19743878] gl|20143929|ref|NM 134434.1|[20143929] gi|19924155|ref|NM\_134440.1|[19924155] gi|20143932|ref|NM\_134441.1|[20143932] gi|22219460|ref|NM 134442,2|[22219460] gl|19745161|ref|NM\_134444.1|[19745161] gi|41281655|ref|NM\_134445.1|[41281655] gi|41281669|ref|NM 134446.1|[41281669] gi|19924160|ref|NM\_134447.1|[19924160] g||24430221|ref|NM\_134470.2||24430221| ail20336204|ref|NM 138270.1|[20336204] gi|20336206|ref|NM\_138271.1|[20336206] gi|19913374|ref|NM\_138272.1|[19913374] gl|19913376|ref|NM 138273,1|[19913376] gi|19913378|ref|NM 138274.1|[19913378] gi|19913380|ref|NM 138275,1|[19913380] gi|19913382|ref|NM\_138276.1|[19913382] gi|19913384|ref|NM\_138277.1|[19913384] gi|19923079|ref|NM\_138278.1|[19923079] gl|19923712|ref|NM\_138279.1|[19923712] gi|45580744|ref|NM\_138280.3|[45580744] gl|20143961|ref|NM\_138281.1|[20143961] gi|20357538|ref|NM\_138282.1|[20357538] gi|19882258|ref|NM 138283.1|[19882258] gi|19923714|ref|NM 138284.1|[19923714] gi|31982903|ref|NM\_138285,2|[31982903] gi|19923077|ref|NM\_138286.1|[19923077] gi|31377615|ref|NM\_138287.2|[31377615] gi|46358345|ref|NM\_138288.2|[46358345] gi|19923075|ref|NM\_138289.1|[19923075] gi|19923089|ref|NM\_138290.1|[19923089] gi|20336198|ref|NM 138292,1|[20336198] all20336200|ref|NM\_138293.1|[20336200] all19923081|ref|NM\_138294.1|[19923081] gi|33359209|ref|NM\_138295.2|[33359209] gi|19923720|ref|NM\_138296.1|[19923720] gi|20143940|ref|NM\_138297,1|[20143940] gil20143919|ref|NM 138298.1|[20143919] gl|20143923|ref|NM\_138299.1|[20143923] gll34147514lreflNM 138300.2lf341475141 gil23510397frefINM 138316.2l[23510397] gi|20143943|ref|NM\_138317.1|[20143943] gil20143945lreflNM 138318.1l[20143945] gi|20336179|ref|NM 138319,1|[20336179] gil20336181|ref|NM\_138320.1|[20336181] gil20336183|ref|NM\_138321.1|[20336183] gi|20336185|ref|NM\_138322.1|[20336185] gi|20336187|ref|NM\_138323.1|[20336187] gl|20336189|ref|NM\_138324.1|[20336189] gi|27894284|ref|NM\_138325.2|[27894284] gi|21264327|ref|NM 138326,1|[21264327] gi|21264323|ref|NM 138327.1|[21264323]

gi|21264325|ref|NM\_138328.1|[21264325] gi|21264319|ref|NM\_138329.1|[21264319] gi|21264321|ref|NM\_138330.1|[21264321] gi|21687142|ref|NM\_138331.1|[21687142] gi|49472829|ref|NM\_138333.3|[49472829] gi|19923878|ref|NM 138334,1|[19923878] ail 19923880 ref NM 138335.1 [19923880] gi|19923882|ref|NM 138336,1|[19923882] gil42490739|ref|NM 138337,3|[42490739] gil24475813|ref|NM 138338.1|[24475813] gi|34304337|ref|NM 138340.3|[34304337] gi|24308397|ref|NM 138341,1|[24308397] gi|31543092|ref|NM 138342.2|[31543092] gi|41871964|ref|NM\_138343.2|[41871964] gi|31543094|ref|NM\_138344.2|[31543094] gi|25286702|ref|NM\_138346.1|[25286702] gi|34147525|ref|NM\_138347.2|[34147525] gi|34222357|ref|NM\_138348.3|[34222357] gi|34147526|ref|NM 138349,2|(34147526) gl|42734378|ref|NM\_138350.2|[42734378] gi|39930516|ref|NM\_138352.1|[39930516] gi|24308405|ref|NM\_138355.1|[24308405] gi|46195760|ref|NM\_138356,1|[46195760] gi[24308399|ref|NM\_138357.1|[24308399] gi|34328079|ref|NM\_138358.2|[34328079] gil33457327frefINM 138360.1ff334573271 gi|31543096|ref|NM 138361,2|(31543096) gi|30794245|ref|NM\_138362.1|[30794245] gi|19923898|ref|NM\_138363.1|[19923898] gi|40538771|ref|NM 138364,2|[40538771] gi|38679899|ref|NM 138368.2|[38679899] gi|34147528|ref|NM\_138369,1|[34147528] ail19923900|ref|NM\_138371.1|[19923900] gi|21687261|ref|NM\_138372.1|[21687261] gi|31377612|ref|NM\_138373.2|[31377612] gi|24308407|ref|NM\_138375.1|[24308407] gi|24308431|ref|NM\_138376.1|[24308431] gil19923904|ref|NM 138379.1|[19923904] gi|19923906|ref|NM 138381.1|[19923906] gi|46195762|ref|NM 138383.1|[46195762] gl|24308425|ref|NM 138384,1|[24308425] gi|19923908|ref|NM 138385,1[[19923908] gi|19923910|ref|NM\_138386.1|[19923910] gi|46852181|ref|NM\_138387.2|[46852181] gl|29789372|ref|NM\_138389.1|[29789372] gi|31982893|ref|NM\_138390.2|[31982893] gi|34222351|ref|NM\_138391.3[[34222351] gi|19923916|ref|NM\_138392.1|[19923916] gi|19923918|ref|NM\_138393.1|[19923918] gi|20149708|ref|NM 138394,2|[20149708] gi|24308435|ref|NM\_138395.1|[24308435] gi|40255015|ref|NM\_138396.3|[40255015] gi|19923924|ref|NM\_138397.1|[19923924] gi|38679901|ref|NM\_138399.2|[38679901] gi|24308439|ref|NM\_138401.1|[24308439] gi|20149710|ref|NM 138402,2|[20149710] gi|40286635|ref|NM 138403.3|[40286635]

ai|50355976|ref|NM\_138408.2|[50355976] gi|24308441|ref|NM\_138409.1|[24308441] qi|31657097|ref|NM\_138410.2|[31657097] gi|34147533|ref|NM\_138412.2|[34147533] gi[31543059|ref|NM\_138413.2|[31543059] gi|19923934|ref|NM\_138414.1|[19923934] gi|19923936|ref|NM\_138415.1|[19923936] gi|34147534|ref|NM\_138416.1|[34147534] gi|49472811|ref|NM\_138417.2|[49472811] gi|33300669|ref|NM\_138418.2|[33300669] gi|39653314|ref|NM\_138419.2|[39653314] ail19923942|ref|NM\_138421.1|[19923942] gi|19923944|ref|NM\_138422.1|[19923944] gi|29826288|ref|NM\_138423.2|[29826288] gi|19923948|ref|NM\_138424.1|[19923948] gi|34147536|ref|NM\_138425.2|[34147536] gi|31377613|ref|NM\_138428.2|[31377613] gi|20149319|ref|NM\_138429.1|[20149319] gi|40316948|ref|NM\_138430.3|[40316948] gi|19923956|ref|NM\_138431.1|[19923956] gi|34147537|ref|NM\_138432.2|[34147537] gi|34330156|ref|NM\_138433.2|[34330156] gi|49574496|ref|NM\_138434.2|[49574496] ali19923962|ref|NM\_138435.1|[19923962] gii34147538|ref|NM\_138436.2|[34147538] gi|45238856|ref|NM\_138437.2|[45238856] gi|34147539|ref|NM\_138439.1|[34147539] gi|39930520|ref|NM\_138440.1|[39930520] gi|31581597|ref|NM\_138441.1|[31581597] gi|34147541|ref|NM\_138442.2|[34147541] gi|34147542|ref|NM\_138443.2|[34147542] gl|40255011|ref|NM\_138444.2|[40255011] gi|41349503|ref|NM\_138445.2|[41349503] gi|19923976|ref|NM\_138446.1|[19923976] gi|34147543|ref|NM\_138447.1|[34147543] gi|20336764|ref|NM\_138448.2|[20336764] gi|30348973|ref|NM\_138450.3|[30348973] gi|19923980|ref|NM\_138451.1|[19923980] gi|19923982|ref|NM\_138452.1|[19923982] gi|34147545|ref|NM\_138453.2|[34147545] gi|19923986|ref|NM\_138454.1|[19923986] gi|34147546|ref|NM\_138455.2|[34147546] gi|45238853|ref|NM\_138456.3|[45238853] gi|29789366|ref|NM\_138457.1|[29789366] gl|24308443|ref|NM\_138458.1|[24308443] gi|34147547|ref|NM\_138459.2|[34147547 gi|32130531|ref|NM\_138460.2|[32130531] gi|19923994|ref|NM\_138461.1|[19923994] gi|37594445|ref|NM\_138462.2|[37594445] gi|34147548|ref|NM\_138463.2|[34147548] gi|41152252|ref|NM\_138465.3|[41152252] gi|42734380|ref|NM\_138467.1|[42734380] gli22095387|ref|NM\_138468.3|[22095387] gil39930522[ref]NM\_138471.1[[39930522] gi|38372900|ref|NM\_138473.2|[38372900] gi|33457310|ref|NM\_138476.2|[33457310] gi|33147083|ref|NM\_138477.1|[33147083]

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gi|42734382|ref|NM\_138479.1|[42734382] gi|19924014|ref|NM\_138482.1|[19924014] gi|24308447|ref|NM\_138484.1|[24308447] gi|24308449|ref|NM\_138487.1|[24308449] gi|45505153|ref|NM\_138492.4|[45505153] gi|28416426|ref|NM 138494.1|[28416426] gi|19924022|ref|NM 138497.1|[19924022] gi|46358349|ref|NM\_138499.2|[46358349] gi|50726974|ref|NM\_138501.4|[50726974] gi|42544204|ref|NM\_138551.2|[42544204] gi|20336310|ref|NM\_138553.1|[20336310] gi|19924148|ref|NM\_138554.1|[19924148] gi|20143966|ref|NM\_138555.1|[20143966] gi|19924150|ref[NM\_138556.1][19924150] gi|19924152|ref|NM\_138557.1|[19924152] ail20336238|ref|NM 138558.1|[20336238] gil20336312|ref|NM 138559.1|[20336312] gi|20302144|ref|NM\_138563.1|[20302144] gi|20302146|ref|NM 138564,1|[20302146] gi|20357555|ref|NM 138565.1|[20357555] gi|20336215|ref|NM\_138566.1|[20336215] gi|32528307|ref|NM\_138567.2|[32528307] gi|29788775|ref|NM\_138568.2|[29788775] gi|20070373|ref|NM\_138569.1|[20070373] gi|20070375|ref|NM\_138570.1|[20070375] ail21359981|ref|NM\_138571.3|[21359981] gi|20070377|ref|NM\_138572.1|[20070377] gi|20070379|ref|NM\_138573.1|[20070379] gi|20070381|ref|NM\_138574.1|[20070381] gi|20070383|ref|NM\_138575.1|[20070383] gi|49574493|ref|NM 138576,2|[49574493] gi|20336334|ref|NM\_138578.1|[20336334] gi|41281674|ref|NM\_138608.1|[41281674] gi|20336745|ref|NM\_138609.1|[20336745] gi|20336747|ref|NM\_138610.1|[20336747] gl|20302154|ref|NM\_138612.1|[20302154] gi|20336291|ref|NM 138614.1|[20336291] gi|20336293|ref|NM 138615.1|[20336293] gi|20336218|ref|NM 138616.1|[20336218] gl|20336220|ref|NM\_138617.1|[20336220] gl|20336222|ref|NM\_138618.1|[20336222] gi|20336266|ref|NM\_138619.1|[20336266] gi|20336297|ref|NM\_138620.1|r203362971 gi|46276872|ref|NM 138621,2|[46276872] gi|46276873|ref|NM\_138622.2|[46276873] gi|46276874|ref|NM\_138623.2|[46276874] gi|46276875|ref|NM\_138624.2|[46276875] gi|46276876|ref|NM\_138625.2|[46276876] gi|46276877|ref|NM\_138626.2|[46276877] gi|46276878|ref|NM 138627,2|[46276878] gi|20336762|ref|NM\_138632.1|[20336762] gi|20336195|ref|NM\_138633.1|[20336195] gi|20302157|ref|NM\_138634.1|[20302157] gi|41406072|ref|NM\_138635.2|[41406072] gi|45935389|ref|NM\_138636.2|[45935389] gi|41281671|ref|NM 138637.1|[41281671]

gi|33946277|ref|NM 138638.1|[33946277]

gi|20336329|ref|NM 138639.1[[20336329] gi|20336263|ref|NM 138640.1|[20336263] gi|24797109|ref|NM 138643.1|[24797109] gi|24797111|ref|NM\_138644.1|[24797111] gi|20336255|ref|NM 138687.1|[20336255] gi|20302170|ref|NM\_138688.1|[20302170] gi|21071069|ref|NM\_138691.2|[21071069] ail20162553|ref|NM\_138693.1|[20162553] gil25777664lreflNM 138694.2[[25777664]] ail29294614|ref|NM\_138697.2|[29294614] gi|38016157|ref|NM\_138698.2|[38016157] gi|45433512|ref|NM 138699,2|[45433512] gi|33469990|ref|NM 138700,2|[33469990] gi|20162565|ref|NM 138701,1|[20162565] gi|20162567|ref|NM 138702.1|[20162567] gi|49574499|ref|NM\_138703.3||495744991 gi|29826297|ref|NM\_138704.2|[29826297] gi|50897265|ref|NM\_138705.2||50897265| gi|47271458|ref|NM\_138706.2|[47271458] gl|20336474|ref|NM\_138707.1|[20336474] ail41281682|ref|NM\_138709.1|[41281682] gi|20336232|ref|NM\_138711.1|[20336232] gi|20336234|ref|NM\_138712.1|[20336234] gi|27886522|ref|NM\_138713.2|[27886522] gi|27886519|ref|NM\_138714.2|[27886519] gi|20357511|ref|NM\_138715.1|[20357511] gil20357514|refINM\_138716.1|[20357514] gi|20336250|ref|NM\_138717.1|[20336250] gi|20336284|ref|NM\_138718.1|[20336284] gi|20336751|ref|NM\_138720.1|[20336751] gi|21040327|ref|NM\_138722.1|[21040327] gi|21040329|ref|NM 138723,1|[21040329] gi|21040331|ref|NM 138724.1|[21040331] gi|25952067|ref|NM\_138726.2|[25952067] gi|38201634|ref|NM\_138727.2|[38201634] gi|38201635|ref|NM\_138728,2|[38201635] gi|38201636|ref|NM\_138729.2|[38201636] gi|23238230|ref|NM\_138730.1|[23238230] gi|40255033|ref|NM\_138731.2|[40255033] gi|21166379|ref|NM\_138732.1||21166379| gl|31543396|ref|NM 138733,2|[31543396] gi|21166381|ref|NM\_138734.1|[21166381] gi|21070966|ref|NM\_138735.1|[21070966] gi|41281684|ref|NM 138736,1|[41281684] gi|21166384|ref|NM\_138737.1|[21166384] gi|20270262|ref|NM\_138738,1|[20270262] gi|20270264|ref|NM\_138739.1|[20270264] gi|41281687|ref|NM\_138740.1|[41281687] gi|34335117|ref|NM\_138761.2|[34335117] gil34335120lrefiNM 138762.2li343351201 gi|34335121|ref|NM 138763,2|[34335121] gi|34335124|ref|NM 138764,2||343351241 gi|34335125|ref|NM 138765.2|[34335125] gi|21070973|ref|NM 138766.1|[21070973] gi|42794611|ref|NM\_138768.2|[42794611] gi|20270302|ref|NM\_138769.1|[20270302] gi|20270306|ref|NM\_138770.1|[20270306]

gil40255028[ref]NM\_138771.2[[40255028] gi|20270310|ref|NM 138773.1|[20270310] gi|34222140|ref|NM 138774,2|[34222140] gi|20270314|ref|NM\_138775.1|[20270314] gi|40317613|ref|NM\_138777.2|[40317613] gi|24308451|ref|NM 138778,1|[24308451] gi|34222136|ref|NM\_138779.2|[34222136] gil20270304|refINM\_138780.1|[20270304] ail49574540|ref|NM\_138781.2|[49574540] gi|20270322|ref|NM\_138783.1|[20270322] ail20270324|ref|NM\_138784.1|[20270324] gil20302037|ref|NM\_138785.1|[20302037] gi|20270326|ref|NM\_138786.1|[20270326] gil42476215[ref]NM 138787,2[[42476215] gi|31543061|ref|NM\_138788.2|[31543061] gi|37059737|ref|NM\_138789.2|[37059737] gi|20270334|ref|NM\_138790.1|[20270334] gi|20302039|ref|NM\_138791,1|[20302039] gi|37059738|ref|NM\_138792.2|[37059738] g||31543621|ref|NM\_138793.2||315436211 gi|20270340|ref|NM\_138794.1|[20270340] gi|38679903|ref|NM\_138795.2|[38679903] gij37059739|ref|NM\_138796.2|[37059739] gi|20270346|ref|NM\_138797.1|[20270346] gl|20270348|ref|NM 138798.1|[20270348] gi|40548386|ref|NM\_138799.2|[40548386] gij20270352|ref|NM\_138800.1|[20270352] gi|20270354|ref|NM\_138801.1|[20270354] gi|20270356|ref|NM\_138802.1|[20270356] gi|31377610|ref|NM\_138803.2|[31377610] gi|21314782|ref|NM\_138804.2|[21314782] gl|38455417|ref|NM\_138805.2|[38455417] gl|41327722|ref|NM 138806,3|[41327722] gi|34147617|ref|NM 138807,21/34147617| gi|20270368|ref|NM 138808.1|[20270368] gi|31982874|ref|NM\_138809.2|[31982874] gl|23199968|ref|NM\_138810.2|[23199968] gi|38570063|ref|NM\_138811.3|[38570063] gi|20270376|ref|NM\_138812.1|[20270376] gi|44888834|ref|NM\_138813.1|[44888834] gi|20304126|ref|NM\_138814.1|[20304126] gi|31982875|ref|NM 138815,2|(31982875) gij20270382jrefjNM\_138817.1j[20270382] gi|34147618|ref|NM\_138818.2|[34147618] gi|20270386|ref|NM\_138819.1|[20270386] gi|20270388|ref|NM 138820.1|[20270388] gi[21070979]ref[NM\_138821.1][21070979] gi[21070981]ref[NM\_138822.1][21070981] gi|20357587|ref|NM\_138923.1|[20357587] gi|20336211|ref|NM\_138924.1|[20336211] gil21040319lreflNM 138925.1l[21040319] gil21040321lrefINM 138926.1l[21040321] gil21040325lrefINM 138927.1[[21040325] gi|22027531|ref|NM\_138928.1|[22027531] gi|42544196|ref|NM 138929,2|[42544196] gi|42544194|ref|NM 138930,2|[42544194] gi|21040335|ref|NM\_138931.1|[21040335]

gi|20357574|ref|NM 138932.1|[20357574] gi|20357577|ref|NM 138933,1|[20357577] gi|20336252|ref|NM 138934,1|[20336252] gi|21070992|ref|NM 138937.1|[21070992] gi|21070994|ref|NM 138938,1|[21070994] gi|25777654|ref|NM 138939.1|[25777654] gi|25777656|ref|NM 138940.1|[25777656] gi|20986530|ref|NM\_138957.1|[20986530] gi|21071002|ref|NM\_138958.1|[21071002] gi|20373170|ref|NM\_138959.1|[20373170] gi[34328940|ref|NM\_138960.3|[34328940] gi|20452463|ref|NM\_138961.1|[20452463] gi|25121991|ref|NM\_138962.2|[25121991] gi|20373176|ref|NM 138963.1|[20373176] gi|44921613|ref|NM 138964.2|[44921613] gi|23510394|ref|NM 138966,2|[23510394] gi|42544128|ref|NM 138967.2|[42544128] gi|40807362|ref|NM\_138969.2|[40807362] gl|41350304|ref|NM\_138970.2|[41350304] gi|46255012|ref|NM\_138971.2|[46255012] gi|46255013|ref|NM\_138972.2|[46255013] gi|46255014|ref|NM\_138973.2|[46255014] gi|20986505|ref|NM\_138980.1|[20986505] gi|20986507|ref|NM 138981.1|[20986507] gi|20986509|ref|NM\_138982.1|[20986509] gi|41281694|ref|NM 138983.1|[41281694] gi|21040359|ref|NM 138991.1|[21040359] gi|21040361|ref|NM\_138992.1|[21040361] gi|47519715|ref|NM\_138993.2|[47519715] gl|20544136|ref|NM\_138994.1|[20544136] gi|20428778|ref|NM\_138995.1|[20428778] gi|20544141|ref|NM\_138996.1|[20544141] gi|21040372|ref|NM 138998,1|[21040372] gi|20452469|ref|NM 138999,1|[20452469] gi|21040338|ref|NM 139002.1|[21040338] ali21040340|ref|NM\_139003.1|[21040340] gil21040342|ref|NM\_139004.1|[21040342] gi|21040344|ref|NM\_139005.1|[21040344] gi|21040346|ref|NM 139006.1|[21040346] gli21040348jrefjNM\_139007.1j[21040348] gi|21040350|ref|NM\_139008.1|[21040350] gil21040352|ref|NM 139009.1|[21040352] gi|21040354|ref|NM 139010.1|[21040354] gl|21040356|ref|NM\_139011.1|[21040356] gi|20986511|ref|NM\_139012.1|[20986511] gi|20986513|ref|NM 139013.1|[20986513] gi|20986515|ref|NM\_139014.1|[20986515] gi|37537690|ref|NM\_139015.3|[37537690] gi|31982870|ref|NM\_139016.2|[31982870] gi|38455420|ref|NM\_139017.3|[38455420] gi|38455397|ref|NM 139018,2|[38455397] gi|20502985|ref|NM 139021.1|[20502985] gi|37595531|ref|NM 139022,2|[37595531] gi|37595532|ref|NM\_139024.2|[37595532] gi|21265033|ref|NM\_139025.1|[21265033] gi|21265042|ref|NM\_139026.1|[21265042] gi|21265045|ref|NM\_139027.1|[21265045]

gi[21265048[ref[NM 139028.1][21265048] gl|34328914|ref|NM 139030,2|[34328914] gi|20986498|ref|NM 139032.1|[20986498] gl[20986500[ref[NM 139033.1][20986500] gi|20986502|ref|NM\_139034.1|[20986502] gi[21071045]ref[NM\_139035.1][21071045] gi[48255897]ref[NM\_139045.2][48255897] gi[20986518]ref[NM\_139046.1[[20986518] ail20986520|ref|NM\_139047.1|[20986520] gi|21071053|ref|NM\_139048.1|[21071053] gi|20986522|ref|NM\_139049.1|[20986522] gil21071017|ref|NM\_139053.1|[21071017] gi|40806184|ref|NM\_139054.2|[40806184] gi|21265057|ref|NM\_139055.1|[21265057] gi[21265060]ref[NM\_139056.1][21265060] gi|21265063|ref|NM 139057.1|[21265063] gi|24497588|ref|NM 139058.1|[24497588] gi|20544144|ref|NM 139062.1|[20544144] gi[21237807[ref[NM\_139067.1][21237807] gi[21237738[ref[NM\_139068.1][21237738] gi[21237741]ref[NM\_139069.1][21237741] g[|21237744|ref|NM\_139070.1|[21237744] gl|21264347|ref|NM\_139071.1|[21264347] gl|31542542|ref|NM\_139072.2|[31542542] gl[31712019[ref]NM\_139073.2[[31712019] gl[30061486]ref[NM\_139074.2][30061486] gi|20589957|ref|NM 139075.1|[20589957] gl|20589960|ref|NM\_139076.1|[20589960] gi|21237767|ref|NM\_139078.1|[21237767] gi[20986487]ref[NM\_139118.1][20986487] gl[20986489|ref[NM\_139119.1][20986489] gl|20986491|ref|NM\_139120.1|[20986491] gi|20986494|ref|NM 139121.1|[20986494] qi|21536354|ref|NM\_139122.1|[21536354] gi[21536356|ref|NM 139123,1[[21536356] gi|21237774|ref|NM\_139124.1|[21237774] g[|21264358|ref|NM\_139125.1|[21264358] gi|22538483|ref|NM\_139126.2|[22538483] gi|21264368|ref|NM\_139131.1|[21264368] gi|21264370|ref|NM\_139132.1||21264370| gi|21264574|ref|NM\_139135.1|[21264574] gi[24497456]ref[NM\_139136.2][24497456] gi|24497455|ref|NM\_139137.2|[24497455] gl|21265054|ref|NM 139155,1|[21265054] gi|34147620|ref|NM\_139156.1|[34147620] gi|47132530|ref|NM\_139157.2|[47132530] gi|21040234|ref|NM\_139158.1|[21040234] gi|26080432|ref|NM 139159,2|[26080432] gi[21040238[ref[NM\_139160.1][21040238] gi|28144891|ref|NM\_139161.2|[28144891] gi[22538487|ref|NM\_139162.2|[22538487] gi[21040244]ref[NM 139163.1[[21040244] gi[21040246|ref|NM\_139164.1|[21040246] gi|21040248|ref|NM\_139165.1|[21040248] gi|31543660|ref|NM 139166,2|(31543660) gi|21040252|ref|NM\_139167.1|[21040252 gi|21040254|ref|NM\_139168.1|[21040254]

gi[34303921[ref[NM\_139169,3][34303921] gi[21040258]ref[NM\_139170.1][21040258] gl|21040260|ref|NM\_139171.1|[21040260] gij21040262jref[NM\_139172.1j[21040262] gi|21040264|ref|NM 139173,1|[21040264] gi[31543071[ref[NM 139174,2][31543071] gil21040268[ref[NM\_139175.1][21040268] gi|46049099|ref|NM\_139176.2|[46049099] gi|31542247|ref|NM\_139177.2|[31542247] gi[21040274[ref[NM\_139178.1][21040274] gi|21040276|ref|NM 139179.1|[21040276] gi|21264596|ref|NM\_139181.1|[21264596] gi[21264593|ref|NM\_139182.1|[21264593] gi|34452706|ref|NM\_139199.1|[34452706] gi|21237793|ref|NM\_139201.1|[21237793] ai|21237731|ref|NM\_139202.1|[21237731] gil21264609iref[NM 139204.1][21264609] gil21237798|ref|NM 139205.1|[21237798] gi|21327707|ref|NM\_139207.1|[21327707] gi|21264360|ref|NM\_139208.1|[21264360] gi|21166358|ref|NM 139209.1|[21166358] gi[47717121]ref[NM\_139211.2][47717121] gi|47717120|ref|NM\_139212.2|[47717120] gi|34328942|ref|NM\_139214.2|[34328942] gl|21327700|ref|NM\_139215.1|[21327700] aii39777589|ref|NM\_139235.3|[39777589] gi|21327692|ref|NM\_139238.1|[21327692] gi|41281708|ref|NM\_139239.1|[41281708] gl[31543098]ref[NM\_139240.2][31543098] gi|21245127|ref|NM 139241.1|[21245127] gi|31543267|ref|NM\_139242.2|[31543267] gi|21245123|ref|NM\_139243.1|[21245123] gi|31652246|ref|NM\_139244,2|[31652246] gi|21245119|ref|NM\_139245.1|[21245119] gi|31377600|ref|NM\_139246.3|[31377600] gl|24497586|ref|NM\_139247.2|[24497586] gi|21245105|ref|NM\_139248.1|[21245105] gi[23110998|ref|NM\_139249.2|[23110998] gi|21281684|ref|NM\_139250.1|[21281684] gl[21327694|ref|NM\_139264.1|[21327694] gi[34147619]ref[NM\_139265.2][34147619] gi|21536300|ref|NM\_139266.1|[21536300] gi|21450855|ref|NM\_139267.1|[21450855] gi|21269876|ref|NM\_139273.1|[21269876] gi[21269871]ref[NM 139274.1][21269871] gi|21493034|ref|NM\_139275.1|[21493034] gi|47080104|ref|NM\_139276.2|[47080104] gi[21327704|ref|NM\_139277.1|[21327704] gi[45643139]ref[NM 139278,2[[45643139] gi|46852158|ref|NM\_139279.3|[46852158] gi|27544926|ref|NM\_139280.1|[27544926] gl|21281676|ref|NM\_139281.1|[21281676] gi|23943885|ref|NM\_139282.1|[23943885] gi[21281678]ref[NM\_139283.1][21281678] gi|21281672|ref|NM\_139284.1|[21281672] gi|21281674|ref|NM 139285,1|[21281674] gi[38683841[ref[NM 139286.3][38683841]

gi[21328450|ref[NM 139290,1][21328450] gi|21327684|ref|NM 139312,1|[21327684] gi|21327686|ref|NM 139313,1|[21327686] gi[21536397]ref[NM 139314.1[[21536397] gi[21536358[ref[NM 139315.1[[21536358] gi|21536422|ref|NM 139316.1[[21536422] gi|21536420|ref|NM\_139317.1|[21536420] gi|27886644|ref|NM\_139318.3|[27886644] gi|21322233|ref|NM\_139319,1|[21322233] gl|23312387|ref|NM\_139320.1|[23312387] gi|21450860|ref|NM\_139321.1|[21450860] gi|21450862|ref|NM\_139322.1|[21450862] gi|31742480|ref|NM\_139323.2|[31742480] gi|21536399|ref|NM 139343.1|[21536399] gi|21536401|ref|NM\_139344,1|[21536401] gi|21536403|ref|NM\_139345.1|[21536403] gi|21536406|ref|NM\_139346.1|[21536406] gl|21536408|ref|NM\_139347.1|[21536408] gi|21536410|ref|NM\_139348.1|[21536410] gi|21536412|ref|NM\_139349.1|[21536412] gl|21536414|ref|NM\_139350.1|[21536414] gl|21536416|ref|NM\_139351.1|[21536416] gij21536361 refiNM 139352.1 [21536361] ai|21536366|ref|NM 139353.1|[21536366] gi|21450843|ref|NM\_139354.1|[21450843] gl|21450845|ref|NM\_139355.1|[21450845] gi|21464133|ref|NM\_144488.1|[21464133] gi|21464135|ref|NM\_144489.1|[21464135] gi|21464141|ref|NM\_144490.1|[21464141] ali21536293 refiNM 144492, 11[21536293] aii41281711irefiNM 144494,1[41281711] aii41281714irefiNM 144495.1[41281714] gi|21493023|ref|NM\_144497.1|[21493023] ali21450852irefiNM 144498.1[[21450852] gi|22027521|ref|NM 144499.1|[22027521] gij21464106|ref|NM 144501.1|[21464106] gij21464108|ref|NM\_144502.1|[21464108] gi[21464110]ref[NM\_144503.1][21464110] gi[21464112]ref[NM\_144504.1][21464112] gi[21464126]ref[NM\_144505.1][21464126] gi|21464128|ref|NM\_144506.1|[21464128] gi[21464130|ref[NM\_144507.1][21464130] gi[24476009|ref|NM\_144508.1|[24476009] gi[21389336|ref|NM\_144563.1|[21389336] gi[47080101|ref|NM 144564.4|[47080101] gi[46485464[ref[NM 144565.2][46485464] gi[36030945]ref[NM 144567.2][36030945] gi|21389334|ref|NM\_144568.1|[21389334] gi|47271474|ref|NM\_144569.3|[47271474] gi[46361989|ref[NM\_144570.2|[46361989] gi[21687267[ref[NM\_144571.1][21687267] gi[21389338]ref[NM 144573.1][21389338] gi[31317279]ref[NM 144574.2][31317279] gi[41152100[ref[NM 144575.2][41152100] gi[31542761|ref|NM 144576.2|[31542761] gi[21389346]ref[NM 144577.1[[21389346]]

gi|21493038|ref|NM 139289.1|[21493038]

gil34147697lrefINM 144578,2I[34147697] gil21389350lrefiNM 144579.1[[21389350] gi|24307870|ref|NM 144580.1|[24307870] gi|21389360|ref|NM 144581.1|[21389360] gi|4251 8075|ref|NM 144582.2|[42518075] gi|4771 7097|ref|NM 144583.2|[47717097] gi|21389358|ref|NM 144584,1|[21389358] gi|24497484|ref|NM\_144585.2|[24497484] gi|40255056|ref|NM\_144586.3|[40255056] gij5034 5832|ref|NM\_144587.2|[50345832] gi|50557643|ref|NM\_144588.4|[50557643] gi|31542746|ref|NM\_144589.2|[31542746] gil21389370|ref|NM 144590,1|[21389370] gil21389380lrefINM 144591.1[[21389380] gi|21389384|ref|NM 144593.1|[21389384] gij21389378|ref|NM 144594.1|[21389378] gi|31542757|ref|NM\_144595.2|[31542757] g||21389382|ref|NM\_144596.1|[21389382] gi|2138 9392|ref|NM\_144597.1|[21389392] gi|33285014|ref|NM\_144598.2|[33285014] gli414O6090lrefINM 144599.3[[41406090] all21389390frefINM 144600.1[[21389390] gli3213 O524 refINM 144601, 21[32130524] gij37059750|ref|NM 144602,2|[37059750] gij34222190|ref|NM 144603.2|[34222190] gi|31377594|ref|NM 144604,2|[31377594] gi|21389408|ref|NM 144605.1|[21389408] glj3433.5183[ref[NM\_144606.3][34335183] gi|40255059|ref|NM\_144607.2|[40255059] gli21389406lrefINM 144608.1[21389406] gli21389416lrefINM 144609.1[[21389416] gil2138.9410/refINM 144610.1/[21389410] gil40255061lrefINM 144611.2l[40255061] gil4273.4440lrefINM 144612.4[[42734440] ali40538807lrefINM 144613.3lf40538807l gil2814-4903|ref|NM 144614.2|[28144903] gi|21389428|ref|NM 144615.1|[21389428] gi|3972.5701|ref|NM 144616.2|[39725701] gi|2138 9432|ref|NM\_144617.1|[21389432] gi|21389426|ref|NM\_144618.1|[21389426] gi|21389430|ref|NM\_144620.1|[21389430] gi|31377596|ref|NM\_144621.2|[31377596] gi|2138 9434|ref|NM\_144622.1|[21389434] gil2138 9444 refINM 144623.1 [21389444] gil2138 9438 refINM 144624.1 [[21389438] gi|40255062|ref|NM 144625.2|[40255062] qi|21389442|ref|NM 144626.1|[21389442] gi|21389452|ref|NM 144627.1|[21389452] gi|21389446|ref|NM\_144628.1|[21389446] gi|21389456|ref|NM\_144629.1|[21389456] gi|4741 9890|ref|NM\_144631.4|[47419890] gil4025:5064|refINM 144632,2|[40255064] gil2788 6666 refINM 144633, 21[27886666] gil34222163|ref|NM 144634.2|[34222163] gil40255250[ref]NM 144635.3[[40255250] gi|21389468|ref|NM 144636.1|[21389468] gi|3422.2165|ref|NM 144637.2|[34222165]

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gi|21389472|ref|NM 144638,1|[21389472] gi|21389466|ref|NM 144639.1|[21389466] gi|24430202|ref|NM 144640.2|[24430202] gi|21389470|ref|NM 144641.1|[21389470] gi|32401419|ref|NM\_144642.3|[32401419] gi|21389474|ref|NM\_144643.1|[21389474] gi|31543824|ref|NM 144644.2|[31543824] ail21389478|ref|NM\_144645.1|[21389478] gil32189367|ref|NM 144646.2|[32189367] gij34222166iref|NM 144647.2|[34222166] gii21389482|ref|NM 144648.1|[21389482] gij21389524|ref|NM\_144649.1|[21389524] gi|21389518|ref|NM 144650.1|[21389518] gi|47271461|ref|NM 144651,2|[47271461] gi|21389522|ref|NM 144652.1|[21389522] gi|42716306|ref|NM\_144653,3|[42716306] gi|21389526|ref|NM\_144654.1|[21389526] gi|42476008|ref|NM\_144657.2|[42476008] gi[40068508|refINM 144658,2|[40068508] g||48995169|ref|NM\_144659.3|[48995169] qii2 1389544|ref|NM\_144660.1|[21389544] gil34222170[ref[NM\_144661.2][34222170] gl[21389548]ref[NM 144662.1][21389548] gi[21389542|ref|NM\_144663.1|[21389542] gi|46195786|ref|NM\_144664.3|[46195786] gi|31377590|ref|NM\_144665.2|[31377590] gi|2 1389554|ref|NM\_144666.1|[21389554] gi|2 1389550|ref|NM\_144667.1|[21389550] gi|34222172|ref|NM\_144668.2|[34222172] gi|2 1389558|ref|NM\_144669.1|[21389558] gi|2 1389560 ref|NM\_144670.1 [21389560] gi|24432055|ref|NM\_144671.2|[24432055] gil24638434|ref|NM\_144672.2|[24638434] gij3 1563435|ref|NM\_144673.2|[31563435] gi|2 1389568|ref|NM 144674.1|[21389568] gii2 1389570|ref|NM\_144675.1|[21389570] gi|21389572|ref|NM\_144676.1|[21389572] gl|39812180|ref|NM\_144677.2|[39812180] gi|33186853|ref|NM\_144678.2|[33186853] gl|21389576|ref|NM 144679.1|[21389576] gl|21389578|ref|NM\_144681.1|[21389578] gi|40255066|ref|NM\_144682.2|[40255066] gi|34147700|ref|NM\_144683.2|[34147700] gil21389584|ref|NM\_144684.1|[21389584] gi|34222353|ref|NM\_144685.3|[34222353] gli21389588[ref[NM\_144686.1][21389588] gi[21955153|ref|NM\_144687.1|[21955153] gi|40255068|ref|NM\_144688.2|[40255068] gi[34303923|ref|NM\_144689.3|[34303923] gi|21389592|ref|NM\_144690.1|[21389592] gi|46852396|ref|NM\_144691.3|[46852396] gi|21389596|ref|NM 144692.1|[21389596] gi|21687263|ref|NM\_144693.1|[21687263] gi|21389598|ref|NM\_144694.1|[21389598] gil21389600|ref|NM\_144695.1|[21389600] gil51093835[ref[NM\_144696.3][51093835] gi|31543068|ref|NM\_144697.2|[31543068]

gi|24432064|ref|NM\_144698.2|[24432064] gi|49249974|ref|NM\_144699.2|[49249974] ai|24430211|refINM 144701,2|[24430211] ail21389614lrefiNM 144702.1[[21389614] gi|21389608|ref|NM 144703.1|[21389608] gi|21389616|ref|NM 144704.1|[21389616] gi|34222169|ref|NM 144705.2|[34222169] gi|34147701|ref|NM\_144706.2|[34147701] gi|21389622|ref|NM\_144707.1|[21389622] gi|21389306|ref|NM\_144709.1|[21389306] gi|30795194|ref|NM\_144710.2|[30795194] gi|40255070|ref|NM\_144711.3|[40255070] gi[38198666]ref[NM\_144712.2][38198666] gil21389490|ref|NM 144713,1|[21389490] gil21389492|ref|NM 144714,1|[21389492] gil32526891|ref|NM 144715.2|[32526891] gi[21389496]ref[NM 144716.1][21389496] gl[40255072]ref[NM\_144717.2][40255072] gi|40255074|ref|NM\_144718.2|[40255074] gi|40255075|ref|NM\_144719.2|[40255075] gi|46852162|ref|NM\_144720.2|[46852162] gl[37059751[ref[NM\_144721.2][37059751] gil46411157|ref|NM 144722,2|[46411157] gil21389510|ref|NM 144723.1|[21389510] gil21687269|ref|NM 144724.1|[21687269] gl|40255077|ref|NM\_144725.2|[40255077] gi[21389514]ref[NM\_144726.1][21389514] ail21389516|ref|NM 144727.1|[21389516] gij21536330|ref|NM 144728.1|[21536330] gli21536332|ref|NM 144729.1|[21536332] gi|21536319|ref|NM\_144732.1|[21536319] gil21536321 refINM 144733.1 [21536321] gil21536323lreflNM 144734.1l[21536323] gl|47524169|ref|NM\_144736.3|[47524169] gi|21536336|ref|NM\_144765.1|[21536336] gi|21464138|ref|NM\_144766.1|[21464138] gil31563332|ref|NM 144767.3|[31563332] gil21618328|ref|NM 144769.1|[21618328] gil48762928|ref|NM 144770.2|[48762928] gi|21426826|ref|NM\_144772.1|[21426826] gi|30581162|ref|NM\_144773.2|[30581162] gi|21426844|ref|NM\_144775.1|[21426844] gi|21614514[ref|NM\_144776.1][21614514] gi|21536307|ref|NM\_144777.1|[21536307] gil46411178|ref|NM 144778,2|[46411178] gi|47778937|ref|NM\_144779.1|[47778937] gi|21614500|ref|NM 144780.1|[21614500] gi|21735593|ref|NM\_144781.1|[21735593] gi|21618335|ref|NM 144782.1|[21618335] gi|21618356|ref|NM 144947.1|[21618356] gi|41349445|ref|NM\_144949.2|[41349445] gi|21614530|ref|NM\_144956.1|[21614530] gi|21614532|ref|NM\_144957.1|[21614532] gi|21450646|ref|NM\_144962.1|[21450646] gi|21450642|ref|NM\_144963.1|[21450642] gil21450650|ref|NM 144964.1|[21450650] ail21450644|ref|NM 144965.1|[21450644]

gi|21450654|ref|NM\_144966.1|[21450654] gi|40255079|ref|NM\_144967.2|[40255079] gi|21450658|ref|NM\_144968.1|[21450658] gi|21450652|ref|NM\_144969.1|[21450652] gi|21450662|ref|NM 144970,1|[21450662] gi|47271496|ref|NM 144972,3|[47271496] gi|32307180|ref|NM 144973,2|[32307180] gi|21699053|ref|NM 144974.1|[21699053] gi|50086625|ref|NM 144975.2|[50086625] gi[21699059|ref|NM 144976.1|[21699059] gl|21450670|ref|NM\_144977.1|[21450670] gi|21450664|ref|NM 144978.1|[21450664] gi|34222176|ref|NM\_144979,2|[34222176] gi|21450668|ref|NM\_144980.1|[21450668] gi|21450678|ref|NM\_144981.1|[21450678] gi|34787414|ref|NM\_144982.3|[34787414] gi|21450676|ref|NM\_144984.1|[21450676] gi|32880202|ref|NM 144985,2|[32880202] gi|21450690|refINM 144987,1|[21450690] gi|41349504|ref|NM 144988,2|[41349504] gi|45267820|ref|NM 144990,2|[45267820] all22001419|ref|NM 144991.2|[22001419] gl|50355981|ref|NM\_144992.3|[50355981] gi|41327751|ref|NM\_144994.6|[41327751] gi|39777581|ref|NM\_144995.2|[39777581] gi|33598957|ref|NM\_144996.2|[33598957] gl[34335184|ref[NM\_144997.3][34335184] gi|21450710|ref|NM 144998,1|[21450710] gi|34147703|ref|NM 144999.2|[34147703] gi|31377592|ref|NM 145000.2|[31377592] gl|21450708|ref|NM\_145001.1|[21450708] gi[21450718]ref[NM\_145003.1][21450718] gij40316951 ref NM\_145004.4 [40316951] gi|37039614|ref|NM\_145005.3|[37039614] gli37059752lrefINM 145006.2lf370597521 gil21450724lrefINM 145007.1[21450724] gi|21450726|ref|NM 145008.1|[21450726] gi]24432063|ref|NM 145010,2|[24432063] gl|24462252|ref|NM 145011,2|[24462252] gi|32171246|ref|NM\_145012.3|[32171246] gii21450728|ref|NM 145013.1|[21450728] ai|21450730|ref|NM\_145014.1|[21450730] gi|31543160|ref|NM 145015.2|[31543160] gil31542212lreflNM 145016.2lf315422121 gli21450742lreflNM 145017.1l[21450742] gi|25072198|ref|NM 145018.2|[25072198] gi|31542759|ref|NM 145019,2|[31542759] gi|34222173|ref|NM 145020,2|[34222173] gi|50539409|ref|NM 145021.4|[50539409] gi|37059791|ref|NM 145023.3|[37059791] gi|21450748|ref|NM 145024.1|[21450748] gi|34222175|ref|NM\_145025.2|[34222175] gi|38570144|ref|NM\_145026.2|[38570144] gi|47271465|ref|NM\_145027.3|[47271465] gi|37059793|ref|NM 145028,3|[37059793] gi|21450766|ref|NM 145029.1|[21450766] gi|21450760|ref|NM\_145030.1|[21450760]

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gi|24432071|ref|NM 145032.2|[24432071] gi|21450764|ref|NM 145033.1|[21450764] gi|21450774|ref|NM 145034.1|[21450774] gi|40255082|ref|NM 145035.2|[40255082] gl|21450778|ref|NM\_145036.1|[21450778] gi|21450780|ref|NM\_145037.1|[21450780] gi|21450776|ref|NM\_145038.1|[21450776] gi|49619233|ref|NM\_145039.2|[49619233] gi|47132586|ref|NM\_145040.2|[47132586] gi|21450795|ref|NM\_145041.1|[21450795] gi|34147705|ref|NM\_145042.2|[34147705] gi|21450799|ref|NM\_145043.1|[21450799] gi|21699063|ref|NM\_145044.1|[21699063] gi|40068494|ref|NM\_145045.3|[40068494] gi|34222181|ref|NM\_145046.2|[34222181] gi|45643132|ref|NM\_145047.3|[45643132] gi|34222178|ref|NM\_145048,2|[34222178] gi|2145O801|ref|NM\_145049.1|[21450801] gi|47271469|ref|NM\_145050.2|[47271469] gil34147709|ref|NM\_145051.2|[34147709] gil21450815|ref|NM 145052.1|[21450815] gil50086627|ref|NM 145053,3|[50086627] gij31543066|ref|NM 145054,2|[31543066] g||21450813|ref|NM\_145055.1|[21450813] gi|21450823|ref|NM 145056.1|[21450823] gi|30089965|ref|NM\_145057.2|[30089965] gij21450827|ref|NM 145058.1|[21450827] gij21450821|ref|NM\_145059.1|[21450821] gil21450831|ref|NM 145060.1|[21450831] gil47419927|ref|NM 145061.3|[47419927] gil2145Q835|ref|NM 145062,1|[21450835] gil34147711|ref|NM 145063,2|[34147711] gil21450837|ref|NM 145064,1|[21450837] gil21450833|ref|NM 145065.1|[21450833] gij22027467|ref|NM 145068.2|[22027467] gi|21614506|ref|NM 145071.1|[21614506] gi|21614537|ref|NM\_145074.1|[21614537] gi|39725702|ref|NM\_145080.2|[39725702] gij21483181 ref[NM\_145102.1 [21483181] gij21618348|ref|NM\_145109.1|[21618348] gi|21618350|ref|NM\_145110.1|[21618350] gi|21495177|ref|NM\_145111.1|[21495177 g||21704262|ref|NM\_145112.1||21704262 gi|21704264|ref|NM\_145113.1|[21704264] gi|21704266|ref|NM\_145114.1|[21704266] gi|21536373|ref|NM 145115.1|[21536373] qi|21704268|ref|NM 145116.1|[21704268] gi|38044281|ref|NM\_145117.2|[38044281] gi|41281724|ref|NM 145119.1|[41281724] gi|21704278|ref|NM\_145159.1|[21704278] gi|21729894|ref|NM\_145160.1|[21729894] gi|21729896|ref|NM\_145161.1|[21729896] gil21729898|ref|NM 145162,1|[21729898] gi|21553312|ref|NM 145165.1|[21553312] gi|38569485|ref|NM 145166.2|[38569485] gi|21553314|ref|NM 145167.1|[21553314] gi|21553310|ref|NM\_145168.1|[21553310]

qil21553316|refINM 14:5169.1|[21553316] qil40255086|ref|NM 14.5170,2|[40255086] qil39753962|ref|NM 14:5171,2|[39753962] gil21553320lrefINM 14:5172.1l[21553320] gil21553322|refINM 14:5173.1|[21553322] gij21553334|ref|NM 14:5174.1|[21553334] gi|21553328|ref|NM\_145175.1|[21553328] gi|21553330|ref|NM 14 5176.1|[21553330] gi|21553324|ref|NM\_145177.1|[21553324] gi|38327523|ref|NM\_14:5178.2|[38327523] gi|21553338|ref|NM\_145179.1|[21553338] gi|24475827|ref|NM\_14:5180.2|[24475827] gil22035619lreflNM 14 5182.1 [22035619] gil22035621|ref|NM 14:5183,1|[22035621] gi|40806198|ref|NM\_14.5185.2|[40806198] gi|21729875|ref|NM\_145186.1|[21729875] gi|21729885|ref|NM\_145187.1|[21729885] gi|21729887|ref|NM 14 5188.1|[21729887] gi|21729889|ref|NM 145189.1|[21729889] gi|21729891|ref|NM 145190.1|[21729891] gi|21729877|ref|NM\_145196.1|[21729877] gi|21729879|ref|NM\_145197.1|[21729879] gil21729881|ref|NM\_145198.1|[21729881] gil21729883|ref|NM 14 5199.1|[21729883] gil46852395ireflNM 14:5200,21[46852395] gil40255088ireflNM 14:5201.31[40255088] gi|48976058|ref|NM 14:5202,3|[48976058] gi|34222183|ref|NM 145203,2|[34222183] gi|33942065|ref|NM\_145204.2|[33942065] gl|34222180|ref|NM 145205.2|[34222180] ail21624647[ref]NM\_145206.1[[21624647] gi|21624653|ref|NM\_145207.1|[21624653] gi|21624655|ref|NM\_145208.1|[21624655] gi|21735603|ref|NM\_145212.1|[21735603] gi|21735605|ref|NM\_145213.1|[21735605] gi|24497621|ref|NM 145214,2|[24497621] gl|50593527|ref|NM 14:5230.1|[50593527] gi|21687227|ref|NM 145231.1|[21687227] gi|37059754|ref|NM 145232.2|[37059754] gi|34147713|ref|NM 145233.2|[34147713] gl|34147714|ref|NM\_145234.2|[34147714] gi|34222185|ref|NM\_145235.2|[34222185] gi|21687138|ref|NM\_145236.1|[21687138] gi|21955121|ref|NM\_145237.1|[21955121] gi|34147716|ref|NM\_145238.2|[34147716] gil21687111|ref|NM 145239,1|[21687111] gi|21687047|ref|NM 145241.1|[21687047] ai|21687049|ref|NM 145242.1|[21687049] gi|33186904|ref|NM 145243.2|[33186904] gi|34222182|ref|NM 145244.2|[34222182] gi|34147717|ref|NM 145245.2|[34147717] gi|50409631|ref|NM 145246.3|[50409631] gi|50593523|ref|NM 145247.4|[50593523] ail37059756lreflNM 145248.2lf370597561 gil21699069lreflNM 145249.1[[21699069] gil50355979lreflNM 14:5250.2lf503559791 gi|34222188|ref|NM 145251.2|[34222188]

gil21687059[ref[NM 145252.1][21687059] gi|21687061|ref|NM\_145253.1|[21687061] gi|21687071|ref[NM\_145254.1][21687071] gi|22547113|ref|NM\_145255.2|[22547113] gi|45593137|ref|NM\_145256.2|[45593137] gi|48675821|ref|NM\_145257.2|[48675821] gi|21687083|ref|NM\_145258.1|[21687083] gi[21687097|ref|NM\_145259.1|[21687097] gi|21687099|ref|NM\_145260.1|[21687099] gi|41152082|ref|NM\_145261.2|[41152082] gi|31543062|ref|NM\_145262.2|[31543062] gi|21687118|ref|NM\_145263.1|[21687118] gi|34222184|ref|NM\_145265.2|[34222184] gl|40556270|ref|NM\_145266.4|[40556270] gi|46275838|ref|NM\_145267.2|[46275838] gi|24432075|ref|NM\_145268.2|[24432075] gi[34222189[ref]NM\_145269.2][34222189] gi|21687187|ref|NM\_145270.1|[21687187] gi[34147718]ref[NM\_145271.2][34147718] gi|37059757|ref|NM\_145272.2|[37059757 gi|37059758|ref|NM\_145273.2|[37059758] gil21687219|ref|NM\_145274.1|[21687219] gl|21687234|ref|NM\_145275.1|[21687234] gij21687236|ref|NM\_145276.1|[21687236] gi|44662822|ref|NM\_145277.3|[44662822] gl|21687148|ref|NM\_145278.1|[21687148] gl|41406058|ref|NM\_145279.3|[41406058] gi|31377537|ref|NM\_145280.3|[31377537] gi|28460691|ref|NM\_145282.1|[28460691] gi|21699083|ref|NM\_145283.1|[21699083] gi|40255093|ref|NM\_145284.3|[40255093] gi|21699077|ref|NM\_145285.1|[21699077] gi|21686994|ref|NM\_145286.1|[21686994] gi|21686996|ref|NM\_145287.1|[21686996] gi|21687251|ref|NM\_145288.1|[21687251] gi|40255095|ref|NM\_145291.2|[40255095] gl|34222191|ref|NM\_145292.2|[34222191] gi|21686972|ref|NM\_145293.1|[21686972] gl|37574045|ref|NM\_145294.3|[37574045] gil42734386[ref[NM\_145295.2][42734386] gi|21686976|ref|NM\_145296.1|[21686976] gi|21699081|ref|NM\_145297.1|[21699081] ali31083201|ref|NM\_145298.3|[31083201] gi|21686978|ref|NM\_145299.1|[21686978] gi[21686980]ref[NM\_145300.1][21686980] gi|21945057|ref|NM\_145301.1|[21945057] gi|21687067|ref|NM\_145303.1|[21687067] gi|34147719|ref|NM\_145304.2|[34147719] gi|21687150|ref|NM\_145305.1|[21687150] gl|21687152|ref|NM\_145306.1|[21687152] gi|26190613|ref|NM\_145307.2|[26190613] gi[34147720|ref[NM\_145308.2|[34147720] gi|21687174|ref|NM\_145309.1|[21687174] gi|21945060|ref|NM\_145310.1|[21945060] gi|22202613|ref|NM\_145311.1|[22202613] gi|34147721|ref|NM\_145312.2|[34147721] gi[21687176]ref[NM\_145313.1][21687176]

gi|21687122|ref|NM 145314,1|[21687122] gi|21918871|ref|NM 145315,2|[21918871] gi|31543075|ref|NM\_145316.2|[31543075] gi|21735579|ref|NM\_145320.1|[21735579] gi|21735581|ref|NM\_145321.1|[21735581] gi|21735583|ref|NM\_145322,1|[21735583] gi|21735585|ref|NM\_145323.1|[21735585] gi|21735587|ref|NM\_145324.1|[21735587] gil21704273|ref|NM\_145325.1|[21704273] gi|21687265|ref|NM\_145326.1|[21687265] gi|22035566|ref|NM 145328.1|[22035566] gi|21735608|ref|NM\_145330.1|[21735608] gi|21735561|ref|NM\_145331.1|[21735561] gi|21735563|ref|NM\_145332.1|[21735563] gi|21735565|ref|NM 145333.1|[21735565] gi|34304341|ref|NM\_145341.2|[34304341] gi|21735558|ref|NM\_145342.1|[21735558] gl|21735615|ref|NM\_145343.1|[21735615] gi|21735617|ref|NM 145344.1|[21735617] gi|21703361|ref|NM\_145345.1|[21703361] gil41281730 ref[NM\_145346.1 [41281730] gi|27437003|ref|NM\_145347.1|[27437003] gi[27437005]ref[NM\_145348.1][27437005] gli33598926|ref|NM\_145349.1|[33598926] glj33598930[ref]NM\_145350.1[[33598930] gi|33598932|ref|NM\_145351.1|[33598932] gi|33598934|ref|NM\_145352.1|[33598934] gi|22035652|ref|NM\_145637.1|[22035652] gi|22035608|ref|NM\_145638.1|[22035608] gi|22035643|ref|NM\_145639.1|[22035643] gi|22035645|ref|NM\_145640.1|[22035645] gi|22035647|ref|NM\_145641.1|[22035647] gi|22035649|ref|NM\_145642.1|[22035649] gi|22035593|ref|NM\_145644.1|[22035593] gi|21717802|ref|NM\_145645.1|[21717802] gl[39777583]ref[NM\_145646.2][39777583] gl|21717806|ref|NM\_145647.1|[21717806] gi|21717815|ref|NM\_145648.1|[21717815] gi|30061503|ref|NM\_145649.2|[30061503] gl|40255097|ref|NM 145650,2|[40255097] gi|21717813|ref|NM 145651.1|[21717813] gi|23238241|ref|NM\_145652.2|[23238241] gi|21717823|ref|NM\_145653.1|[21717823] gi|31563532|ref|NM\_145654.2|[31563532] gl|30061505|ref|NM\_145655.2|[30061505] gi[33457325|ref|NM\_145657.1|[33457325] gi|21717831|ref|NM\_145658.1|[21717831] gi|28416912|ref|NM\_145659.2|[28416912] gl|22035656|ref|NM\_145660.1|[22035656] gi|49619235|ref|NM\_145662.2|[49619235] gi|22035681|ref|NM\_145663.1|[22035681] gi|22027491|ref|NM\_145664.1|[22027491] gi|22027495|ref|NM\_145665.1|[22027495] gi|22035557|ref|NM 145685,1|[22035557] gi|46249360|ref|NM\_145686.2|[46249360] gi|46249362|ref|NM\_145687.2|[46249362 gi|22035553|ref|NM\_145689.1|[22035553]

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gi|21735624|ref|NM 145690.1|[21735624] gi|22538424|ref|NM 145691,2|[22538424] gi|22027647|ref|NM 145693.1|[22027647] gl|22027633|ref|NM 145695.1|[22027633] gi|22035559|ref|NM 145696.1|[22035559] gi|22027506|ref|NM\_145697.1|[22027506] gi|21735486|ref|NM\_145698.1|[21735486] gi|22907036|ref|NM\_145699.2|[22907036] gi[22027510]ref[NM\_145701.1][22027510] gi|22209000|ref|NM\_145702.1|[22209000] gi|27262644|ref|NM\_145714.1|[27262644] gi|23312391|ref|NM\_145715.1|[23312391] gil21955169|ref|NM\_145716.1|[21955169] gil23312393|ref|NM 145719.1|[23312393] gi|28416947|ref|NM 145720.2|[28416947] gi|22027617|ref|NM\_145725.1|[22027617] gi|22027619|ref|NM\_145726.1|[22027619] gi|22035662|ref|NM\_145727.1|[22035662] gi|22027637|ref|NM\_145728.1|[22027637] gl|22035589|ref|NM\_145729.1|[22035589] gi|22027652|ref|NM\_145730.1|[22027652] ali39777618|ref|NM\_145731.2|[39777618] gi|22035571|ref|NM\_145733.1|[22035571] gl/22035573/ref/NM 145734.1/[22035573] gl|22027527|ref|NM 145735.1|[22027527] gi|22035699|ref|NM\_145738.1|[22035699] gi|22035611|ref|NM\_145739.1|[22035611] gi|48375174|ref|NM\_145740.2|[48375174] g||22035667|ref|NM\_145747.1|[22035667] g1|22035669|ref|NM\_145748.1|[22035669] gl|22027623|ref|NM\_145751.1|[22027623] gi|22027474|ref|NM\_145752.1|[22027474] ail21955171|ref|NM\_145753.1|[21955171] gil34147722|ref|NM\_145754.2|[34147722] gi|21955236|ref|NM\_145755.1|[21955236] gi|21955238|ref|NM\_145756,1|[21955238] gli22027626|ref|NM\_145759.1|[22027626] gi|22091447|ref|NM\_145762,1|[22091447] gi|22091449|ref|NM\_145763.1|[22091449] gi|22035633|ref|NM\_145764.1|[22035633] gl/22035635/refINM 145791.1/F220356351 gl|22035637|ref|NM\_145792.1|[22035637] gi|22035691|ref|NM\_145793.1|[22035691] gi|22035583|ref|NM\_145794.1|[22035583] gli22035585[ref[NM\_145795.1][22035585] gi|46397391|ref|NM\_145796,2|[46397391] gi|47132623|ref|NM\_145798.2|[47132623] gi|33624782|ref|NM\_145799.2|[33624782] gi|33624799|ref|NM\_145800.2|[33624799] gi|33624820|ref|NM\_145802.2|[33624820] gi|22027629|ref|NM\_145803.1|[22027629] gi|21956638|ref|NM\_145804.1|[21956638] gi|21956640|ref|NM 145805.1|[21956640] gi|28274700|ref|NM\_145806.2| [28274700] gi|24308064|ref|NM\_145807.1|[24308064] gi|21956644|ref|NM\_145808.1|[21956644] gi|21956646|ref|NM\_145809.1|[21956646]

gi|22027513|ref|NM\_145810.1|[22027513] gi|22027550|ref|NM\_145811.1|[22027550] 91/22202628/refINM 145812.1/[22202628] gi|22202630|ref|NM\_145813.1|[22202630] gi|22027553|ref|NM 145814,1|[22027553] gi|22027556|ref|NM 145815,1|[22027556] gi|41281739|ref|NM 145818.1|[41281739] gi|22202615|ref|NM\_145858.1|[22202615] gi|22538791|ref|NM 145859.1|[22538791] gi|22538793|ref|NM 145860.1|[22538793] gi|22325374|ref|NM\_145861.1|[22325374] gi|22209008|ref|NM\_145862.1|[22209008] gi|22208950|ref|NM\_145863.1|[22208950] ail22208991[ref[NM\_145864.1][22208991] gi|22004646|ref|NM\_145865.1|[22004646] gil22035628|ref|NM\_145867.1|[22035628] gil22165430|ref|NM\_145868.1|[22165430] gi|22165432|ref|NM\_145869.1|[22165432] gi|22202623|ref|NM 145870.1|[22202623] gi|22202625|ref|NM\_145871.1|[22202625] gi|22208963|ref|NM\_145872.1|[22208963] gi|22325359|ref|NM\_145886.1|[22325359] gi|22325361|ref|NM\_145887.1|[22325361] gi|22208983|ref|NM\_145888.1|[22208983] g||22538404|ref|NM\_145891.1|[22538404] gi|22538406|ref|NM\_145892.1|[22538406] gi|22538408|ref|NM 145893.1|[22538408] gi|22208986|ref|NM\_145894.1|[22208986] g||22208988|ref|NM 145895.1||22208988 gi|22202634|ref|NM\_145896.1|[22202634] gl|22202636|ref|NM\_145897.1|[22202636] gi|22538807|ref|NM\_145898.1|[22538807] gi|22208966|ref|NM\_145899.1|[22208966] gi|22208970|ref|NM\_145901.1|[22208970] gi|22208972|ref|NM\_145902.1|[22208972] gl|22208974|ref|NM\_145903.1|[22208974] gi|22208976|ref|NM\_145904.1|[22208976] gij22208978|ref|NM 145905.1|[22208978] gl|22325378|ref|NM\_145906.1|[22325378] gl|41281748|ref|NM 145909.1|[41281748] gl|41281752|ref|NM\_145910.1|[41281752] gi|23308736|ref|NM\_145911.1|[23308736] gi|31543287|ref|NM\_145912.3|[31543287] gl|33942075|ref|NM\_145913.2|[33942075] gi|37537685|ref|NM 145914.2|[37537685] gi|22202618|ref|NM 145918.1|[22202618] gi|22547137|ref|NM\_146387.1|[22547137] gi|22547139|ref|NM\_146388.1|[22547139] gi|23065546|ref|NM\_146421.1|[23065546] 9i|31377586|ref|NM 147127,2|[31377586] 9i|40316919|ref|NM 147128,3|[40316919] gi|33359214|ref|NM\_147129.2|[33359214] gi|24475831|ref|NM\_147130.1|[24475831] gi|22165417|ref|NM\_147131.1|[22165417] gi|22165419|ref|NM\_147132.1|[22165419] gi|22212924|ref|NM\_147133.1|[22212924] 9i|22212926|ref|NM\_147134.1|[22212926]

gil22202605lrefINM 147147.11[2220:2605] gil23065556|ref|NM 147148.1|[2306:5556] gi|23065559|ref|NM 147149.1|[2306:5559] gi|22325355|ref|NM 147150.1|[22325355] gi|22325382|ref|NM 147152.1|[22325382] gi|41350331|ref|NM 147156.3|[41350331] gi|22212933|ref|NM 147157.1|[22212933] gi|22212935|ref|NM\_147158.1|[22212935] gi|22212937|ref|NM\_147159.1|[22212937] gi|22325389|ref|NM\_147160.2|[22325389] gi|25777709|ref|NM\_147161.2|[25777709] gi|22212921|ref|NM\_147162.1|[2221 2921] gi|22212917|ref|NM\_147164.1|[22212917] gi|22538388|ref|NM\_147166.1|[22538388] gi|22219468|ref|NM 147168,1|[22219468] gi|22219470|ref|NM\_147169.1|[22219470] gi|22538390|ref|NM 147171.1|[22538390] gi|22219464|ref|NM\_147172.1|[22219464] gl|22219466|ref|NM\_147173.1|[22219466] gi|27597081|ref|NM\_147174.2||27597081] gi|24432101|ref|NM\_147175.2|[2443.2101] gi|34303920|ref|NM\_147180.2|[34303920] gli28373060irefINM 147181,2li283730601 gil28373061lrefINM 147182.2l[28373061] gil28373062|ref|NM 147183,2|[28373062] gi|22538445|ref|NM\_147184.1|[22538445] glj22538392|ref|NM 147185.1|[22538392] gi|22547118|ref|NM\_147187.1|[22547118] gil22547148|ref|NM\_147188.1|[22547148] g||22218338|ref|NM 147189.1||22218338| gil22218344|ref|NM 147190.1|[22218344] gil22218340|ref|NM 147191,1|[22218340] gil27436934|ref|NM 147192,2|[27436934] gil22218342|ref|NM 147193,1|[22218342] gil22218352|ref|NM 147194,1|[22218352] gij22507406|ref|NM 147195.1|[22507406] g||22218346|ref|NM 147196.1||22218346| gi|31563541|ref|NM 147197,2|[31563541] gi|23238189|ref|NM\_147198.2|[23238189] gi|22218356|ref|NM\_147199.1|[22218356] gi|22538425|ref|NM\_147200.1|[22538425] gl|22218620|ref|NM\_147202.1|[22218620] gi|42544197|ref|NM\_147203.2|[4254-4197] gil22547179|ref|NM 147204.1|[22547179] gil22538456|ref|NM 147223.1|[22538456] gil22538458|ref|NM 147233,1|[22538458] gil22538427|ref|NM 147686,1|[22538427] gil46370088[ref[NM 147777,2][4637O088] gi|22538430|ref|NM 147780.1|[22538430] gi|22538432|ref|NM\_147781.1|[22538432] gi|22538434|ref|NM\_147782.1|[22538434] gi|22538436|ref|NM\_147783.1|[22538436] gil22325387/ref/NM 148169.1/[22325387] gil22538439|ref|NM 148170,1|[22538439] gi|22325367|ref|NM 148171,1|[22325367] gi|22538477|ref|NM 148172.1|[22538477] gi|22538479|ref|NM\_148173.1|[22538479]

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gi|22538417|ref|NM\_148174.1|[22538417] ail22547211|ref|NM\_148175.1|[22547211] gi|22547214|ref|NM\_148176.1|[22547214] gi|22547143|ref|NM\_148177.1|[22547143] gi|22325369|ref|NM 148178.1|[22325369] gi|22325371|ref|NM\_148179.1|[22325371] gi|27262648|ref|NM 148414.1|[27262648] gi|27262650|ref|NM 148415.1|(27262650) gi|27262652|ref|NM\_148416.1|[27262652] gi|22547128|ref|NM\_148570.1|[22547128] gi|22547130|ref|NM\_148571.1|[22547130] gi|22538810|ref|NM\_148672.1|[22538810] gi|48475049|ref|NM\_148674.2|[48475049] gi|45433549|ref|NM 148675,2|[45433549] gi|22380642|ref|NM 148676.1|[22380642] gi|22538492|ref|NM\_148842.1|[22538492] gl|22538489|ref|NM 148886.1|[22538489] gi|22547124|ref|NM\_148887.1|[22547124] gi|22538797|ref|NM\_148888.1|[22538797] gi|22507398|ref|NM\_148894.1|[22507398] gi|22507402|ref|NM\_148896.1|[22507402] gi|22507404|ref|NM 148897.1|[22507404] gi|22538410|ref|NM 148898,1|[22538410] g||22538412|ref|NM\_148899.1|[22538412] gi|22538414|ref|NM\_148900.1|[22538414] gil23238193|ref|NM\_148901.1|[23238193] gi|23238196|ref|NM\_148902.1|[23238196] gi|23397645|ref|NM\_148903.1|[23397645] gi|34335284|ref|NM\_148904.2|[34335284] gl|34335285|ref|NM\_148905.2|[34335285] gi|22547168|ref|NM\_148906.1|[22547168] gl|22547170|ref|NM\_148907.1|[22547170] gi|22547172|ref|NM 148908.1|[22547172] gl|22547175|ref|NM 148909,1|[22547175] gi|22547218|ref|NM\_148910.1|[22547218] gli23312389[ref[NM\_148911.1][23312389] gi|23200007|ref|NM\_148912.1|[23200007] gi|23200011|ref|NM\_148913.1|[23200011] gl|23200013|ref|NM\_148914.1|[23200013] gi|23200015|ref|NM\_148915.1|[23200015] gi|23200017|ref|NM\_148916.1|[23200017] gi|22547188|ref|NM\_148918.1|[22547188] gi|34335278|ref|NM\_148919.2|[34335278] gi|22538452|ref|NM\_148920.1|[22538452] gi|41327739|ref|NM\_148921.2|[41327739] gl|41281767|ref|NM\_148923.1|[41281767] gi|23200001|ref|NM\_148936.1|[23200001] gi|23110931|ref|NM\_148954.1|[23110931 gi|23111031|ref|NM\_148955.1|[23111031] gl|23199997|ref|NM\_148956.1|[23199997] gi|31652245|ref|NM 148957,2|[31652245] gi|31077214|ref|NM\_148959.2|[31077214] gi|22507371|ref|NM\_148960.1|[22507371] gl|42544244|ref|NM\_148961.3|[42544244] gi|40255258|ref|NM\_148962.3|[40255258] gi|22507379|ref|NM 148963.1|[22507379] gi|23110951|ref|NM 148964,1|[23110951]

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gi|23200020|ref|NM\_148965.1|[23200020] gil23200022lrefINM 148966.1l[23200022] gil23200024lreflNM 148967,1[[23200024] gil23200026lrefINM 148968,1[[23200026] gil23200028lrefINM 148969.1[[23200028] gi|23200030|ref|NM\_148970.1|[23200030] gl|23200032|ref|NM\_148971.1|[23200032] gi|23200034|ref|NM 148972.1|[23200034] gi|23200036|ref|NM\_148973.1|[23200036] gij23200038|ref|NM\_148974.1|[23200038] gi|23110994|ref|NM\_148975.1|[23110994] gi|23110934|ref|NM\_148976.1|[23110934] gil23510399lrefINM 148977.1[[23510399] gil23510401lrefINM 148978.1l[23510401] gi|23110956|ref|NM\_148979.1|[23110956] gi|23200003|ref|NM\_148980.1|[23200003] gi|23200005|ref|NM\_149379.1|[23200005] gi|23110938|ref|NM 152132,1|[23110938] gl|23199970|ref|NM 152133.1|[23199970] gi|44889478|ref|NM 152219.2|[44889478] gi|40549400|ref|NM\_152221.2|[40549400] gi|23238199|ref|NM\_152222,1|[23238199] gi|23312367|ref|NM\_152223.1|[23312367] gli23312373|ref|NM\_152224.1|[23312373] gil23312375|ref|NM 152225.1|[23312375] gil23312377irefINM 152226.11[23312377] gil23111046|ref|NM 152227.1|[23111046] gil42476079|ref|NM 152230,2|[42476079] gil22726202lrefINM 152232,11[22726202] glj23111050|ref|NM 152233,1|[23111050] gl|23111063|ref|NM 152235.1|[23111063] gl|23065525|ref|NM 152236.1|[23065525] gi|23065528|ref|NM\_152237.1|[23065528] gi|23111054|ref|NM\_152238.1|[23111054] gi|23199977|ref|NM\_152240.1|[23199977] gi|23238225|ref|NM\_152243.1|[23238225] gil23111027|ref|NM 152244,1|[23111027] gll23238253|ref|NM 152245,1|[23238253] gl|23238255|ref|NM 152246,1|[23238255] gi|23238257|ref|NM 152247.1|[23238257] gi|22748616|ref|NM 152250.1|[22748616] gl|34098963|ref|NM\_152251.2|[34098963] gi|23238260|ref|NM\_152253.1|[23238260] gl|23110947|ref|NM\_152255.1|[23110947] gi|23308686|ref|NM\_152257.1|[23308686] gi|31543194|ref|NM\_152259.2|[31543194] gil23308688|ref|NM 152260.1|[23308688] gil22748614|ref|NM 152261.1|[22748614] gil22748624|ref|NM 152262,1|[22748624] gil22748618|ref|NM 152263,1|[22748618] gl|40255100|ref|NM 152264.2|[40255100] gi|22748622|ref|NM 152266.1|[22748622] gi|31542782|ref|NM 152267.2|[31542782] gi|34303925|ref|NM\_152268.2|[34303925] gll22748626|ref|NM\_152269.1|[22748626] gil42476006|refINM 152270,2|[42476006] all40217795|refINM 152271,2|[40217795]

gil22748640lreflNM 152272.1|[22748640] gij34328080|ref|NM\_152274.2|[34328080] gil38683852/refINM 152275,2[[38683852] gil22748634|ref|NM 152277,1|[22748634] gil23397408|ref|NM 152278.1|[23397408] gil25014092|ref|NM 152279,2|[25014092] gi|31377588|ref|NM 152280.2|[31377588] gl|22748638|ref|NM 152281.1|[22748638] gi|42476016|ref|NM\_152282.2|[42476016] gi|23097314|ref|NM\_152283.1|[23097314] gi|40548376|ref|NM\_152284,2|[40548376] gi|22748652|ref|NM\_152285.1|[22748652] gil38524588lreflNM 152286.2|[38524588] gi|40805101|ref|NM\_152287.2|[40805101] gi|22748650|ref|NM\_152288.1|[22748650] gi|22748660|ref|NM\_152289.1|[22748660] gi|22748654|ref|NM\_152290.1|[22748654] g||22748664|ref|NM\_152291.1|[22748664] gi|34303922|ref|NM\_152292.2|[34303922] gl[38202254]ref[NM\_152295.3][38202254] gi|49249971|ref|NM\_152296.3|[49249971] g||27262629|ref|NM\_152298.2|[27262629] gil23097284lreflNM 152299.11[23097284] gil38569502lreflNM 152300.2l[38569502] gil31559785|ref|NM 152301.3|[31559785] glj23097278[ref]NM\_152302.1[[23097278] gi|22748680|ref|NM\_152303.1|[22748680] gi|22748674|ref|NM\_152304.1|[22748674] gi[31982952]ref[NM\_152305.1][31982952] gl|23312361|ref|NM\_152306.2|[23312361] gi|22748678|ref|NM\_152307.1|[22748678] gi|24308244|ref|NM\_152308.1|[24308244] gil45505138lreflNM 152309,211455051381 gi|23097309|ref|NM\_152310.1|[23097309] gi|22748684|ref|NM\_152311.1|[22748684] gi|33285007|ref|NM\_152312.2|[33285007] gl|40807350|ref|NM\_152313.2|[40807350] gi|22748688|ref|NM\_152314.1|[22748688] g||22748690|ref|NM\_152315.1|[22748690] gli22748692|ref|NM\_152316.1|[22748692] gi|22748694|ref|NM\_152317.1|[22748694] gl|22748696|ref|NM\_152318.1|[22748696] gij34303924 ref[NM\_152319.2 [34303924] gl|22748700|ref|NM\_152320.1|[22748700] gil22748702|ref|NM 152321.1|[22748702] gil22748704|ref|NM 152322.1|[22748704] gil22748706|ref|NM 152323.1|[22748706] gi|22748708|ref|NM\_152324.1|[22748708] gij22748710[ref[NM\_152325.1][22748710] gil50355986|ref|NM 152326.2|[50355986] gi|22748714|ref|NM\_152327.1|[22748714] gi|40316947|ref|NM\_152328.3|[40316947] qi|45439341|ref|NM\_152329.3|[45439341] gij34303929[ref]NM\_152330.2[[34303929] gli22748722[refINM 152331.1][22748722] gil31377583[ref]NM 152332.2[[31377583] gi|22748726|ref|NM 152333.1|[22748726]

gil38570110lreflNM 152334.2l[38570110] gil22748730|ref|NM 152335.1|[22748730] gij22748732[ref]NM 152336.1][22748732] gi|22748734|ref|NM 152337.1|[22748734] gij22748736|ref|NM 152338.1|[22748736] gi[31377584]ref[NM\_152339.2][31377584] gij23097312|ref|NM\_152340.1|[23097312] gi|31542755|ref|NM\_152341.2|[31542755] gi|22748742|ref|NM\_152342.1|[22748742] gil22748744|ref|NM 152343.1|[22748744] gil22748746|ref|NM 152344.1|[22748746] gil33636763|ref|NM 152345.3|[33636763] gil22748750|ref|NM 152346.1|[22748750] gil34222281|ref|NM 152347.3|[34222281] gil22748754|ref|NM 152348.1|[22748754] gi|22748756|ref|NM 152349.1|[22748756] gl|22748758|ref|NM 152350.1|[22748758] gi|31982944|ref|NM\_152351.2|[31982944] g||22748762|ref|NM\_152352.1|[22748762] gi|22748764|ref|NM\_152353.1|[22748764] g||38566701|ref|NM\_152354.2|[38566701] gil22748768|refINM 152355.1|[22748768] gil31542771|ref|NM 152356.2|[31542771] gil22748772|ref|NM 152357.1|[22748772] gi|22748774|ref|NM 152358.1|[22748774] gi|22748776|ref|NM\_152359.1|[22748776] gi|40789269|ref|NM\_152360.2|[40789269] g||24308367|ref|NM\_152361.1|[24308367] gi|22748780|ref|NM\_152362.1|[22748780] gi|40255103|ref|NM\_152363.2|[40255103] gi|22748786|ref|NM\_152365.1|[22748786] gi|24432073|ref|NM\_152366.2|[24432073] gi|22748790|ref|NM\_152367.1|[22748790] g||32698778|ref|NM\_152369.2|[32698778] gil22748798|ref|NM 152371.1|[22748798] gil40255105|ref|NM 152372.2|[40255105] gij38678533|ref|NM 152373.2|[38678533] gij22748804|ref|NM\_152374.1|[22748804] gl|22748806|ref|NM\_152375.1|[22748806] gi|31377582|ref|NM\_152376.2|[31377582] gi|22748810|ref|NM\_152377.1|[22748810] gi|22748812|ref|NM\_152378.1|[22748812] gi|22748814|ref|NM\_152379.1|[22748814] gi|22748818|ref|NM\_152382.1|[22748818] gi|32964831|ref|NM 152383.2|[32964831] gi|22748822|ref|NM 152384.1|[22748822] gi|22748824|ref|NM\_152385.1|[22748824] gi|23510288|ref|NM\_152386.2|[23510288] gi|45387952|ref|NM\_152387.2|[45387952] gi|22748830|ref|NM\_152388.1|[22748830] gi|22748832|ref|NM\_152389.1|[22748832] gi|22748834|ref|NM\_152390.1|[22748834] gi|40445400|ref|NM\_152391.2|[40445400] gil22748838|ref|NM 152392.1|[22748838] gil45593141[ref|NM 152393.2][45593141] gi|31543187|ref|NM\_152394.2|[31543187] gij24308369|ref|NM\_152395.1|[24308369]

gi|22748844|ref|NM 152396,1|[22748844] gi|22748846|ref|NM 152397.1|[22748846] gi|22748848|ref|NM 152398,1|[22748848] gil22748850lreflNM 152399.1l[22748850] gil22748852|reflNM 152400.1|[22748852] gil22748854|ref|NM 152401.1|[22748854] gi|28460693|ref|NM\_152402.1|[28460693] gi|33469928|ref[NM\_152403,2|[33469928] gi|24432082|ref|NM\_152404.2|[24432082] gi|22748860|ref|NM\_152405.1|[22748860] all40255108lreflNM 152407,2lf402551081 gil22748864|ref|NM 152408.1|[22748864] gi|40255110|ref|NM 152409.2|[40255110] gi|22748868|ref|NM 152410.1|[22748868] gi|22748870|ref|NM\_152411,1|[22748870] gi|22748872|ref|NM\_152412.1|[22748872] gi|22748874|ref|NM\_152413.1|[22748874] gl|44680137|ref|NM\_152414.3|[44680137] gi|22748878|ref|NM\_152415.1|[22748878] gli22748880[ref[NM\_152416.1][22748880] gl|22748882|ref|NM 152417.1|[22748882] gil45243529|ref|NM 152418,2|[45243529] gi|22748888|ref|NM 152420.1|[22748888] gli34303930|ref|NM 152421,2|[34303930] gl|30089951|ref|NM 152422,3|[30089951] gl|24432076|ref|NM\_152423.2|[24432076] gi|22748896|ref|NM\_152424.1|[22748896] gi|22748898|ref|NM\_152425.1|[22748898] gil227489001reflNM 152427.1[[22748900] ali40255112ireflNM 152428,2l[40255112] gi|31377576|ref|NM 152429,2|[31377576] gi|22748910|ref|NM 152430.1|[22748910] gil22748904|ref|NM 152431.1|[22748904] gl|38327515|ref|NM 152433.2|[38327515] gi|22748918|ref|NM 152434.1|[22748918] gi|22748912|ref|NM 152435.1|[22748912] gi|22748922|ref|NM 152436.1|[22748922] gl|22748916|ref|NM\_152437.1|[22748916] gi|22748926|ref|NM\_152439.1|[22748926] gi|47458824|ref|NM\_152440.3|[47458824] gil22748930|ref|NM 152441.1|[22748930] gli41393615lreflNM 152442,2lf41393615l gli22748934|ref|NM 152443.1|[22748934] gli22748928|ref|NM 152444.1|[22748928] gi|22748942|ref|NM 152445.1|[22748942] gi|31542243|ref|NM 152447.2|[31542243] gi|22748940|ref|NM\_152448.1|[22748940] gi|40288200|ref|NM 152449.2|[40288200] gi|22748944|ref|NM\_152450.1|[22748944] gi|50582990|ref|NM\_152451.2|[50582990] gi|34303931|ref|NM 152453,2|[34303931] gil22748952|ref|NM 152454.1|[22748952] gil31542776|ref|NM 152455.2|[31542776] gi|22748956|ref|NM 152456.1|[22748956] gl|22748966|ref|NM 152457.1|[22748966] gi|34222277|ref|NM 152458.4|[34222277] gi|31543192|ref|NM\_152459.2|[31543192]

gi|48255961|ref|NM\_152460.2|[48255961] gil50345998|ref|NM\_152461.2|[50345998] gil22748974|ref|NM\_152462.1|[22748974] gi|22748968|ref|NM 152463.1|[22748968] gi|22748978|ref|NM\_152464.1|[22748978] gi|22748972|ref|NM 152465.1|[22748972] gi|22748982|ref|NM 152466.1|[22748982] gi|22748976|ref|NM\_152467.1|[22748976] gi|31377553|ref|NM\_152468.3|[31377553] gi|22748990|ref|NM\_152470.1|[22748990] gi|22748994|ref|NM\_152472.1|[22748994] gi|22748988|ref|NM\_152473.1|[22748988] gi|34303933|ref|NM\_152474.2|[34303933] gi|22748992|ref|NM 152475,1|[22748992] gi|22749002|ref|NM 152476,1|[22749002] gi|46358359|ref|NM 152477,2|[46358359] gi|22749006|ref|NM 152478.1|[22749006] gl|46391095|ref|NM\_152479.3|[46391095] gij22749010|ref|NM\_152480.1|[22749010] gi|22749004|ref|NM\_152481.1|[22749004] gi|22749014|ref|NM\_152482.1|[22749014] gi|22749008|ref|NM\_152483.1|[22749008] gi|38570116|ref|NM 152484,2|[38570116] gi|31542750|ref|NM 152485,2|[31542750] gi|22749012|ref|NM\_152486.1|[22749012 gl|22749022|ref|NM\_152487.1|[22749022 gi|22749016|ref|NM 152488,1|[22749016] gi|22749026|ref|NM\_152489.1|[22749026] gi|22749020|ref|NM\_152490.1|[22749020] gi|47458826|ref|NM\_152491.3|[47458826] gi|22749024|ref|NM\_152492.1|[22749024] gi|38570114|ref|NM\_152493.2|[38570114] gi|22749028|ref|NM 152494,1|[22749028] gi|22749038|ref|NM 152495,1|[22749038] gi|22749032|ref|NM 152496,1|[22749032] gli22749042|ref|NM\_152497.1|[22749042] gl|22749036|ref|NM 152498,1|[22749036] gl|22749046|ref|NM\_152499,1|[22749046] gi|22749040|ref|NM\_152500.1|[22749040] gi|39540513|ref|NM\_152501.2|[39540513] gi|47578108|ref|NM\_152503.2|[47578108] gl|31542748|ref|NM\_152504.2|[31542748] gi|34303934|ref|NM 152505,2|[34303934] gi|22749058|ref|NM\_152506.1|[22749058] gi|22749052|ref|NM 152507,1|[22749052] gi|22749056|ref|NM 152509.1|[22749056] gij22749066|ref|NM 152510,1|[22749066] gi|51093844|ref|NM 152511.3|[51093844] gi|34222283|ref|NM\_152512.3|[34222283] gl|32526889|ref|NM\_152515.2|[32526889] gi|22749078|ref|NM 152516.1|[22749078] gi|22749072|ref|NM\_152517.1|[22749072] gi|40217793|ref|NM\_152519.2|[40217793] gl|31542751|ref|NM\_152520.2|[31542751] gi|37059759|ref|NM\_152522.2|[37059759] gi|22749084|ref|NM 152523.1|[22749084] gi|22749094|ref|NM 152524.1|[22749094]

gil37059794lrefINM 152525.3[[37059794] gil45505181|ref|NM 152526.3|[45505181] gil42415495|ref|NM 152527.3|[42415495] gi|22749102|ref|NM 152528.1|[22749102] gi|40255146|ref|NM\_152529.3|[40255146] gi|31542773|ref|NM 152531.3|[31542773] gij22749104|ref|NM\_152533.1|[22749104] gi|44917614|ref|NM\_152534.2|[44917614] gij50080161|ref|NM\_152536.2|[50080161] gi|22749122|ref|NM\_152538.1|[22749122] gil22749116|ref|NM 152539,1|[22749116] gi|40255253|ref|NM\_152540.3|[40255253] gij31542532|ref|NM 152542.2|[31542532] gi|22749124|ref|NM\_152543.1|[22749124] gij22749134|ref|NM 152544.1|[22749134] gij22749128|ref|NM 152545.1|[22749128] gij22749138|ref|NM\_152546.1|[22749138] gij22749132|ref|NM\_152547.1|[22749132] gi|22749142|ref|NM\_152548.1|[22749142] gij22749136|ref|NM\_152549.1|[22749136] gl|47578102|ref|NM\_152550.2|[47578102] gil33457354|ref|NM 152551,2|(33457354) gil22749150|ref|NM 152552.1|[22749150] gil34303935|ref|NM 152553,2|[34303935] gil22749154|ref|NM 152554.1|[22749154] gi|22749158|ref|NM 152556.1|[22749158] gij46358365|ref|NM\_152557.3|[46358365] gij48675824|ref|NM\_152558.2|[48675824] gi|30795189|ref|NM\_152559.2|[30795189] gil44681483|ref|NM 152562,2|[44681483] gli24211014lreflNM 152563.1l[24211014] gil35493700|ref|NM 152564,3|[35493700] gil22749164|ref|NM 152565,1|[22749164] gli22749178|ref|NM 152568,1|[22749178] g||22749172|ref|NM 152569.1|[22749172] gij22749182|ref|NM 152570.1|[22749182] gij22749176|ref|NM\_152571.1|[22749176] gi|31377569|ref|NM\_152572.2|[31377569] gi|40255118|ref|NM\_152573.2|[40255118] glj22749190|ref|NM\_152574.1|[22749190] gi|22749188|ref|NM\_152577.1|[22749188] gi|22749198|ref|NM\_152578.1|[22749198] gil50053828|refINM 152579.2|[50053828] gil22749196|ref|NM 152581.1|[22749196] gil37537697|refINM 152582.3|[37537697] gil22749204|ref|NM 152583.1|[22749204] gi|24211016|ref|NM 152584.1|[24211016] gi|34303936|ref|NM 152585.1|[34303936] gi|40255120|ref|NM\_152586.2|[40255120] gij40255122|ref|NM\_152587.2|[40255122] gi|22749210|ref|NM\_152588.1|[22749210] gil22749212|ref|NM 152589,1|[22749212] gil22749214|ref|NM 152590.1|[22749214] gil22749216|ref|NM 152591.1|[22749216] gil38570051|ref|NM 152592.2|[38570051] gi|22749220|ref|NM 152594.1|[22749220] gi|25777745|ref|NM\_152595.2|[25777745]

gi|34303938|ref|NM\_152596.2|[34303938] gi|34222280|ref|NM\_152597.3|[34222280] gi|22749228|ref|NM\_152598.1|[22749228] gi|46048468|ref|NM\_152599.2|[46048468] gi|22749232|ref|NM\_152600.1|[22749232] gi|22749234|ref|NM\_152601.1|[22749234] gi|22749236|ref|NM\_152602.1|[22749236] gi|34303940|ref|NM 152603,2|[34303940] gi|23097320|ref|NM 152604.1|[23097320] gi|46094067|ref|NM\_152605.2|[46094067] gi|32306517|ref|NM 152606.2|[32306517] gi|22749242|ref|NM 152607.1|[22749242] gi|40255124|ref|NM 152608,2|[40255124] gi|22749246|ref|NM\_152609.1|[22749246] gi|22749248|ref|NM\_152610.1|[22749248] gi|34303942|ref|NM\_152611.2|[34303942] gi|29501808|ref|NM\_152612.2|[29501808] gi|22749254|ref|NM\_152613.1|[22749254] gl|22749256|ref|NM\_152614.1|[22749256] gi|22749258|ref|NM\_152615.1|[22749258] gi|29029527|ref|NM 152616,3|[29029527] gi|31377565|ref|NM 152617,2|[31377565] gl|40217787|ref|NM\_152618.2|[40217787] gi|22749266|ref|NM\_152619.1|[22749266] gi|37622897|ref|NM\_152620.2|[37622897] gl|37059795|ref|NM\_152621.3|[37059795] gi|40255126|ref|NM\_152622.2|[40255126] gi|22749274|ref|NM\_152623.1|[22749274] gi|37537718|ref|NM\_152624.3|[37537718] gi|22749278|ref|NM\_152625.1|[22749278] gi|37537682|ref|NM 152626,2|[37537682] gi|24432084|ref|NM 152628,2|[24432084] gi|34303943|ref|NM\_152629,2|[34303943] gi|34303945|ref|NM 152630.2|[34303945] gl|22749288|ref|NM\_152631.1|[22749288] gi|22749290|ref|NM\_152632.1|[22749290] gi|22749292|ref|NM\_152633.1|[22749292] gi|22749296|ref|NM 152635.1|[22749296] gl|22749298|ref|NM\_152636.1|[22749298] gi|22749300|ref|NM\_152637.1|[22749300] gi|34303946|ref|NM\_152638.2|[34303946] gi|40548402|ref|NM\_152640.3|[40548402] gl|50845421|ref|NM 152643,5|[50845421] gli22749312|ref|NM\_152644,1|[22749312] gil22749318IrefINM 152647.1II227493181 gi|22749322|ref|NM 152649.1|[22749322] gi|22749324|ref|NM\_152652.1|[22749324] gi|22749326|ref|NM 152653,1|[22749326] gi|22749328|ref|NM 152654.1|[22749328] gi|40217797|ref|NM 152655,2|[40217797] gi|33286435|ref|NM 152657,3|[33286435] gi|22749336|ref|NM\_152658.1|[22749336] gi|22749340|ref|NM 152660.1|[22749340] gi|22749344|ref|NM\_152662.1|[22749344] gi[32441282|ref|NM\_152663.2|[32441282] gil22749350lreflNM 152665.1[[22749350] gi|22749352|ref|NM 152666.1|[22749352]

gi|23308748|ref|NM 152667.1|[23308748] gi|22749356|ref|NM\_152670.1|[22749356] gi|50881948|ref|NM\_152671.2|[50881948] gi|47271484|ref|NM\_152672.3|[47271484] gi|23097330|ref|NM 152673.1|[23097330] gi|23097324|ref|NM 152675.1|[23097324] gi|22749362|refINM 152676,1|[22749362] gi|22749364|ref|NM 152677.1|[22749364] gi|32698776|ref|NM 152678.1|[32698776] gi|34328082|ref|NM 152679,2|[34328082] gi|22749366|ref|NM 152680.1|[22749366] gi|22749368|ref|NM\_152681.1|[22749368] gi|22749370|ref|NM\_152682.1|[22749370] gl|22749372|ref|NM\_152683.1|[22749372] gi|22749374|ref|NM\_152684.1|[22749374] gi|44680142|ref|NM\_152685.2|[44680142] gi|22749376|ref|NM 152686.1|[22749376] gi|22749378|ref|NM 152687,1|[22749378] gi|22749380|ref|NM\_152688,1|[22749380] gi|40255128|ref|NM 152689.2|[40255128] gi|24497590|ref|NM\_152690.1|[24497590] qi|31542248|ref|NM\_152692.2|[31542248] gl|31543182|ref|NM\_152693.2|[31543182] gi|22749386|ref|NM\_152694.1|[22749386] gi|47271440|ref|NM\_152695.3|[47271440] gi|38201637|ref|NM\_152696.3|[38201637] gl|34303947|ref|NM\_152697.2|[34303947] gi|22749392|ref|NM 152698,1|[22749392] gi|34303948|ref|NM 152699,2|[34303948] gi|34303949|ref|NM\_152700.2|[34303949] gl|31657091|ref|NM 152701,2|[31657091] gi|22749400|ref|NM\_152702.1|[22749400] gi|40288202|ref|NM\_152704.2|[40288202] gi|22749406|ref|NM\_152705.1|[22749406] gl|34303950|ref|NM\_152706.2|[34303950] gi|31652216|ref|NM\_152707.2|[31652216] gi|22749412|ref|NM\_152710.1|[22749412] gi|34303951|ref|NM 152713,2|[34303951] gl|22749416|ref|NM\_152715.1|[22749416] gi|22749426|ref|NM 152716,1|[22749426] gi|22749420|ref|NM 152717.1|[22749420] gi|22749430|ref|NM 152718.1|[22749430] gl|22749424|ref|NM\_152719.1|[22749424] gil23510392|ref|NM 152720.1|[23510392] gli47575848lreflNM 152721.2lf475758481 gi|40795672|ref|NM 152722.3|[40795672] gi|22749428|ref|NM\_152723.1|[22749428] gi|34577082|ref|NM\_152724.2|[34577082] gi|22749432|ref|NM 152725.1|[22749432] gi|22749442|ref|NM 152726,1|[22749442] gi|30181235|ref|NM 152727.4|[30181235] gi|22749444|ref|NM\_152728.1|[22749444] gi|38570155|ref|NM\_152729.2|[38570155] gil41529833lreflNM 152730.3l[41529833] gi|22749448|ref|NM\_152731.1|[22749448] gil32964824|ref|NM 152732,2|[32964824]

gil23308690lreflNM 152733.11[23308690]

gi|47271470|ref|NM 152734.2|[47271470] gi|24475836|ref|NM 152735.2|[24475836] gi|34303952|ref|NM 152736.2|[34303952] gi|22749454|ref|NM\_152737.1|[22749454] gil22749456lreflNM 152738.11[22749456] gil24497557|refINM 152739.2|[24497557] gi|41393565|ref|NM\_152740.2|[41393565] gi|22749458|ref|NM\_152742.1|[22749458] gi|25092657|ref|NM\_152743.1|[25092657] gi|32880200|ref|NM\_152744.2|[32880200] gi|23097337|ref|NM\_152745.1|[23097337] gi|22749464|ref|NM\_152747.1|[22749464] gi|33356135|ref|NM\_152748.2|[33356135] gi|37059760|ref|NM\_152749.2|[37059760] gi|40255132|ref|NM\_152750.2|[40255132] gi|22749470|ref|NM\_152751.1|[22749470] gi|31377567|ref|NM\_152753.2|[31377567] gi|41406085|ref|NM\_152754.2|[41406085] gi|22749478|ref|NM\_152755.1|[22749478] gl|22749482|ref|NM\_152757.1|[22749482] gli40255134|ref|NM 152758,2|[40255134] gi|40255136|ref|NM 152759.3|[40255136] gi|22749488|ref|NM 152760,1|[22749488] gl|22749496|ref|NM\_152761.1|[22749496] gi|22749492|ref|NM\_152762.1|[22749492] gil34303954|ref|NM\_152763.2|[34303954] gil22749494|ref|NM\_152764.1|[22749494] ql|34303955|ref|NM 152765,2||34303955| gil37059761lreflNM 152766,2l/370597611 gi|22749502|ref|NM 152769.1|[22749502] gl|22749508|ref|NM 152770.1|[22749508] gi|22749510|ref|NM 152771.1|[22749510] gi|22749516|ref|NM 152772.1|[22749516] gi|34303956|ref|NM 152773.2|[34303956] gi|22749518|ref|NM 152774.1|[22749518] glj22749514|ref|NM 152775.1|[22749514] gi|22749520|ref|NM\_152776.1|[22749520] gi[34303957]ref[NM\_152777.2][34303957] gi|22749524|ref|NM\_152778.1|[22749524] gil22749526|ref|NM 152779.1|[22749526] gi|31343502|ref|NM\_152780.2|[31343502] gi|22749528|ref|NM\_152781.1|[22749528] gi|34303958|ref|NM 152782.2|[34303958] gi|40255138|ref|NM 152783.2|[40255138] gi|38678531|ref|NM\_152784.2|[38678531] gl|33186855|ref|NM\_152785.2|[33186855] gi|22749538|ref|NM\_152786.1|[22749538] gi|38146004|ref|NM\_152787.2|[38146004] gil50511944|ref|NM\_152788.3|[50511944] gil22749542|ref|NM 152789,1|[22749542] gil40255144lrefINM 152791.3lf402551441 gi|22758145|ref|NM\_152792.1|[22758145] gil23618862|ref|NM 152793.1|[23618862] gi|23065534|ref|NM 152794.1|[23065534] gi|23065537|ref|NM\_152795.1|[23065537] gi|23065540|ref|NM\_152796.1|[23065540] gil23111035|ref|NM 152826.1|[23111035]

gi|34304375|ref|NM\_152828.2|[34304375] gi|23238187|ref|NM\_152829.1|[23238187] gi|23238213|ref|NM\_152830.1|[23238213] gi|23238215|ref|NM\_152831.1|[23238215] gi|22779872|ref|NM\_152832.1|[22779872] gil40548390|ref|NM 152834.2|[40548390] all22779869/ref[NM\_152835.1][22779869] gil23238245|ref|NM\_152836.1|[23238245] gi|23238247|ref|NM\_152837.1|[23238247] gi|33469953|ref|NM\_152838.2|[33469953] gil23110967|ref|NM 152840.1|[23110967] gi|23110969|ref|NM 152841,1|[23110969] gi|23110971|ref|NM\_152842.1|[231109711 gi|23110973|ref|NM 152843,1|[23110973] gi|38045916|ref|NM\_152850.2|[38045916] gi|23238235|ref|NM\_152851.1|[23238235] gi|23238237|ref|NM 152852.1|[23238237] gi|23312370|ref|NM\_152854.1|[23312370] gi|23110979|ref|NM\_152855.1|[23110979] gi|23111017|ref|NM\_152856.1|[23111017] gi|23199973|ref|NM\_152857.1|[23199973] gi|23199975|ref|NM\_152858.1|[23199975] gi|22902135|ref|NM 152860.1|[22902135] gi|23238210|ref|NM\_152862.1|[23238210] gi|42476063|ref|NM\_152864.2|[42476063] gi|23110988|ref|NM 152866.1|[23110988] gi|23110990|ref|NM\_152867.1|[23110990] gl|23110983|ref|NM\_152868.1|[23110983] gi|23111020|ref|NM\_152869.1|[23111020] gi|23397656|ref|NM 152870,1|[23397656] gi|23510420|ref|NM 152871.1|[23510420] gl|23510422|ref|NM 152872.1|[23510422] gi|23510424|ref|NM 152873,1|[23510424] gi|23510426|ref|NM\_152874.1|[23510426] gi|23510428|ref|NM\_152875.1|[23510428] gi|23510430|ref|NM\_152876.1|[23510430] gi|23510433|ref|NM\_152877.1|[23510433] gi|23111002|ref|NM\_152878.1|[23111002] gl|25777597|ref|NM\_152879.2||25777597| gi|27886605|ref|NM\_152880.2|[27886605] gi|27886606|ref|NM 152881.2|[27886606] gil27886607[ref]NM\_152882.2[[27886607] gl|27886608|ref|NM\_152883,1|[27886608] g||40805822|ref|NM\_152888.1|[40805822] gi|23097237|ref|NM\_152889.1|[23097237] gi|32964828|ref|NM\_152890.4|[32964828] gi|23097243|ref|NM\_152891.1|[23097243] gi|23097239|ref|NM\_152892.1|[23097239] gi|23312363|ref|NM 152896.1|[23312363] gi|23510349|ref|NM 152897,1|[23510349] gi|40217806|ref|NM\_152898.2|[40217806] gi|23821022|ref|NM 152899.1|[23821022] gli23097339|ref|NM\_152900.1|[23097339] gi|23097245|ref|NM\_152901.1|[23097245] gl|33239373|ref|NM\_152902.2|[33239373] gli45333882|ref|NM\_152903.3|[45333882]

gi|23111040|ref|NM 152827.1|[23111040]

gi|23097259|ref|NM 152904.1|[23097259] gi|34303960|ref|NM 152905.2|[34303960] gi|38488711|ref|NM 152906.2|[38488711] gi|38261959|ref|NM\_152908.2|[38261959] ail34303961lreflNM 152909.2lf343039611 gil32307168lrefINM 152910.3I[32307168] gi|46397315|ref|NM\_152911.2|[46397315] gi|32306535|ref|NM\_152912.3|[32306535] gi|23097273|ref|NM\_152913.1|[23097273] gi|23097269|ref|NM\_152914.1|[23097269] gi|23397682|ref|NM 152916.1|[23397682] gi|23397684|ref|NM 152917.1|[23397684] gi|23397686|ref|NM\_152918,1|[23397686] gi|23397688|ref|NM\_152919.1|[23397688] gi|23397690|ref|NM 152920.1|[23397690] gi|23397692|ref|NM\_152921.1|[23397692] gi|38026872|ref|NM\_152924.2|[38026872] gi|23397695|ref|NM\_152925.1|[23397695] gi|23397697|ref|NM\_152926.1|[23397697] gi|23397699|ref|NM\_152927.1|[23397699] gi|23397701|refINM 152928,1|[23397701] gli23397703|ref|NM 152929,1|[23397703] gi|23397705|ref|NM 152930.1|[23397705] gi|23397707|ref|NM 152931.1|[23397707] gi|23510345|ref|NM 152932.1|[23510345] gi|23312381|ref|NM\_152933.1|[23312381] gi|23312383|ref|NM\_152934.1|[23312383] gi|23397638|ref|NM 152939.1|[23397638] gi|23510436|ref|NM 152942,1|[23510436] gil41281777|ref|NM 152943,1|[41281777] gi|23308700|ref|NM 152945,1|[23308700] gl|41281781|ref|NM 152988.1|[41281781] gi|30061560|ref|NM 152989.2|[30061560] gi|24475838|ref|NM 152990.2|[24475838] gi|24041022|ref|NM 152991.1|[24041022] gl|23510405|ref|NM 152992.1|[23510405] gi|31343495|ref|NM\_152994.2|[31343495] gi|37674231|ref|NM\_152995.3|[37674231] gi|23308723|ref|NM\_152996.1|[23308723] gi|50428928|ref|NM\_152997.2|[50428928] gil23510383lreflNM 152998.1l[23510383] gi|25092600|ref|NM\_152999.2|[25092600] gi|30387616|ref|NM 153000.3|[30387616] gi|24430154|ref|NM 153001,1|[24430154] gi|23308584|ref|NM 153002.1|[23308584] gi|23308598|ref|NM\_153003.1|[23308598] gi|23510357|ref|NM\_153005.1|[23510357] gi|23308586|ref|NM\_153006.1|[23308586] gi|31559788|ref|NM\_153007.3|[31559788] gi|31559787|ref|NM\_153008.3|[31559787] gi|30410025|ref|NM\_153010.3|[30410025] gil51036604lreflNM 153011,2l[51036604] gil23510440lreflNM 153012.1[[23510440] gi|40255107|ref|NM 153013.2|[40255107] gi|23308520|ref|NM\_153014.1|[23308520] gil23308544IrefINM 153015.1II233085441 ail23308510lreflNM 153018.1I[23308510]

gil29824429lrefINM 153019.2l[29824429] gil23308560[ref]NM 153020.1[[23308560] gi[23308506]ref[NM\_153022.1][23308506] gil23308552[refINM 153023.1][23308552] gil23308558[ref[NM 153024.1][23308558] gil23308500[ref[NM 153025.1][23308500] gi|23308518|ref|NM 153026.1|[23308518] gi|23308540|ref|NM\_153027.1|[23308540] gi|23308516|ref|NM\_153028.1|[23308516] gi|48928018|ref|NM\_153029.3|[48928018] gi|23308528|ref|NM\_153031.1|[23308528] gi|23308548|ref|NM\_153032.1|[23308548] gi|23308550|ref|NM\_153033.1|[23308550] gi|40255102|ref|NM\_153034.2|[40255102] gil23308504|ref|NM 153035.1|[23308504] gi|23308562|ref|NM\_153036.1|[23308562] gi[23308536]ref[NM 153038.1][23308536] gij23308512|ref|NM\_153040.1|[23308512] gij23308538[ref]NM\_153041.1[[23308538] gi|45433553|ref|NM\_153043.3|[45433553] gi|23308524|ref|NM\_153044.1|[23308524] gi|33356141|ref|NM\_153045.2|[33356141] gil42734387|refINM 153046.1|[42734387] gli23510361|refINM 153047.1|[23510361] gi|23510363|ref|NM\_153048.1|[23510363] gi|23510386|ref|NM\_153050.1|[23510386] gli23510388|ref|NM 153051.1|[23510388] gi|23510395|ref|NM\_153181.2|[23510395] gi|41281787|ref|NM\_153182.1|[41281787] all41393548|ref|NM 153183.1|[41393548] gii23346423irefINM 153184.1[[23346423] gli47157333|ref|NM 153186,2|[47157333] gi|23510409|ref|NM\_153187.1|[23510409] gi|23510380|ref|NM\_153188.1|[23510380] g||23510417|ref|NM 153189.1|[23510417] gil23510414|ref|NM 153191.1|[23510414] gi|24497600|ref|NM\_153200.1|[24497600] gi|24234685|ref|NM\_153201.1|[24234685] gi|24041039|ref|NM\_153202.1|[24041039] gi|23397448|ref|NM\_153204.1|[23397448] gi|23397450|ref|NM\_153206.1|[23397450] gi|49472839|ref|NM\_153207.3|[49472839] gij23397455|refINM 153208.1|[23397455] gil23397457|ref|NM 153209.1|[23397457] gil23397461[refINM 153211.1][23397461] gi|23397463|ref|NM 153212.1|[23397463] gi|40255148|ref|NM 153213.2|[40255148] gi|23397470|ref|NM\_153214.1|[23397470] gi|23397472|ref|NM\_153215.1|[23397472] gi|23463325|ref|NM\_153216.1|[23463325] gij23397474|ref|NM\_153217.1|[23397474] gij23397476|ref|NM\_153218.1|[23397476] gi|44921601|ref|NM\_153219.2|[44921601] gi|23397480|ref|NM\_153220.1|[23397480] gij23510284|ref|NM 153221.1|[23510284] gil23397482|refINM 153223.1|[23397482] gij48843730|ref|NM 153225.2|[48843730]

gi|23397491|ref|NM 153226.1|[23397491] gi|23397495|ref|NM\_153228.1|[23397495] gi[23397497]ref[NM\_153229.1][23397497] gi|23397499|ref|NM\_153230.1|[23397499] gi|40255150|ref|NM\_153231.2|[40255150] gi|34222202|ref|NM\_153232.2|[34222202] gi|23397509|ref|NM\_153233.1|[23397509] gi|34222285|ref|NM\_153234.3|[34222285] qil28416944|ref[NM\_153236.2|[28416944] gi|23397519|ref|NM\_153238.1|[23397519] gi|28875802|ref|NM\_153239.2|[28875802] gi|34304359|ref|NM\_153240.3|[34304359] gi|23397531|ref|NM\_153244.1|[23397531] gi|23397533|ref|NM\_153246.1|[23397533] gi|23397535|ref|NM\_153247.1|[23397535] gi|31377558|ref|NM\_153248.2|[31377558] gi|49457850|ref|NM\_153251,2|7494578501 gi|45120095|ref|NM\_153252.2|[45120095] gi|24497628|ref[NM\_153253.28|[24497628] gi|23397543|ref|NM\_153254.1|[23397543] gi|33469926|ref|NM\_153255.2|[33469926] gil31377559|ref|NM\_153256.2|[31377559] gi|46371194|ref|NM\_153257.2|[46371194] gil23397553|ref|NM\_153260.1|[23397553] gi|37059796|ref|NM\_153261.3|[37059796] gi|23397557|ref|NM\_153262.1|[23397557] gi|23397559|ref|NM\_153263.1|[23397559] gi|40255154|ref|NM\_153264.2|[40255154] g||23397563|ref|NM\_153265.1|[23397563] g||34222205|ref|NM\_153266.2|[34222205] gi|40538801|ref|NM\_153267.3|[40538801] gi|23397569|ref|NM\_153268.1|[23397569] gi|23943927|ref|NM\_153269.1|[23943927] gi|23397571|ref|NM\_153270.1|[23397571] gi|23397573|ref|NM\_153271.1|[23397573] gi|23510334|ref|NM\_153273.1|[23510334] gl|23397575|ref|NM\_153274.1|[23397575] gi|24497475|ref|NM\_153276.1|[24497475] gl[24497477]ref[NM\_153277.1][24497477] gi|24497479|ref|NM\_153278.1|[24497479] ali24497481|ref|NM\_153279.1|[24497481] gi|23510339|ref|NM\_153280.1|[23510339] gi|24497563|ref|NM\_153281.1|[24497563] gi[24497565|ref|NM\_153282.1|[24497565] gi|24497567|ref|NM\_153283.1|[24497567] gi|24497569|ref|NM 153284.1|[24497569] gi|24497571|ref|NM\_153285.1|[24497571] gi|24497573|ref|NM\_153286.1|[24497573] gi|37704381|ref|NM\_153289,2|[37704381] gi|23463298|ref|NM\_153290.1|[23463298] gi|23463288|ref|NM\_153291.1|[23463288] gil24041031|ref|NM\_153292.1|[24041031] gi|24497494|ref|NM 153320.1|[244974941 gi|24430162|ref|NM 153321.1|[24430162] gi|24430164|ref|NM 153322,1|[24430164] gi|24475840|ref|NM\_153324.2|[24475840] gi|24233573|ref|NM\_153325.1|[24233573]

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gil24497576lrefINM 153326,1[[24497576] gil24119167lreflNM 153328.1l[24119167] gi|34222200|ref|NM 153329,2|[34222200] gi|46094077|ref|NM 153330.2|[46094077] gi|40255152|ref|NM 153331.2|[40255152] gi|31543183|ref|NM 153332.2|[31543183] gi|23503246|ref|NM\_153333.1|[23503246] gi|33598938|ref|NM 153334.3|[33598938] gi|33569217|ref|NM\_153335,3|[33569217] gi|23503260|ref|NM\_153336.1|[23503260] gi|23503254|ref|NM\_153337.1|[23503254] gil23503264|refINM 153338.1|[23503264] gil23503258lrefINM 153339.1[[23503258] gil31377554lreflNM 153340.2lf313775541 gi|23503262|ref|NM\_153341.1|[23503262] gi|23503272|ref|NM 153342,1|[23503272] gl|37059767|ref|NM 153343,2|[37059767] gi|23503276|ref|NM\_153344.1|[23503276] aii23503270|ref|NM\_153345.1|[23503270] gi|34222211|ref|NM\_153346.2|[34222211] gli23503274|ref|NM\_153347.1|[23503274] gi|30795122|ref|NM\_153348.2|[30795122] gi|34222207|ref|NM 153350.2|[34222207] gij37059768|ref|NM 153353,2|[37059768] gi|34222213|ref|NM 153354,2|[34222213] gi|34222210|ref|NM 153355,2|[34222210] gi|23503282|ref|NM 153356.1|[23503282] gi|23503292|ref|NM 153357.1|[23503292] gi|23503286|ref|NM 153358.1|[23503286] gi|23503298|ref|NM\_153359.1|[23503298] gi|23503290|ref|NM\_153360.1|[23503290] gi|37059769|ref|NM\_153361.2|[37059769] gi|23503296|ref|NM\_153362.1|[23503296] gi|23503306|ref|NM\_153363.1|[23503306] gi|23503300|ref|NM\_153364.1|[23503300] gi|23503310|ref|NM\_153365.1|[23503310] gl|23503314|ref|NM 153367.1|[23503314] gi|23503308|ref|NM 153368.1|[23503308] gi|24158475|ref|NM\_153369,1|[24158475] gi|23503318|ref|NM\_153370.1|[23503318] gl|34222215|ref|NM\_153371.2|[34222215] gi|24119276|ref|NM\_153373.1|[24119276] gi|23503312|ref|NM\_153374.1|[23503312] gi|23503320|ref|NM\_153375.1|[23503320] gil23503316|ref|NM 153376.1|[23503316] gil40255156|ref|NM 153377.3|[40255156] gi|24497486|ref|NM 153378.1|[24497486] gi|24041013|ref|NM 153379.1|[24041013] gi|23510454|ref|NM 153380,1|[23510454] gi|41281793|ref|NM\_153381.1|[41281793] gi|24234725|ref|NM\_153425.1|[24234725] gil24234707lrefINM 153426.1l[24234707] gil24234710|ref|NM 153427.1|[24234710] gil24430182|ref|NM 153437,1|[24430182] gil23592219|ref|NM 153442,1|[23592219] gi|46488945|ref|NM 153443.2|[46488945]

gi|23592221|ref|NM 153444.1|[23592221]

gi|23592223|ref|NM 153446.1|[23592223] gi|32481210|ref|NM 153447.2|[32481210] gi|38455418|ref|NM\_153448.2|[38455418] gi|24475843|ref|NM\_153449.2|[24475843] gi|23592231|ref|NM\_153450.1|[23592231] gi|23943891|ref|NM\_153451.1|[23943891] gi|23592241|ref|NM\_153453.1|[23592241] gi|23592235|ref|NM\_153454.1|[23592235] qil45580706|refINM 153456,2|[45580706] gil24430194|ref|NM 153460.1|[24430194] gil24430196|ref|NM 153461,1|[24430196] gi|24430198|ref|NM 153462.1|[24430198] gi|24430200|ref|NM\_153463.1|[24430200] gi|24234755|ref|NM\_153464.1|[24234755] gi|24041017|ref|NM\_153477.1|[24041017] gil24234759|refINM 153478.1|[24234759] gil24234762|refINM 153479.1|[24234762] gi|24430203|refINM 153480.1|[24430203] gi|24430205|ref|NM\_153481.1|[24430205] gi|24430207|ref|NM\_153482.1|[24430207] gi|24430209|ref|NM\_153483.1|[24430209] gl|24430148|ref|NM\_153485.1|[24430148] gi|37595753|ref|NM\_153486.2|[37595753] gi|24475844|ref|NM\_153487.2|[24475844] gi|34335237|ref|NM\_153488.3|[34335237] gi|24234695|ref|NM\_153490.1|[24234695] gi|47717113|ref|NM\_153497.2|[47717113] gi|23943849|ref|NM\_153498.1|[23943849] gi|27437016|ref|NM\_153499.2|[27437016] gl|27437018|ref|NM\_153500.1|[27437018] gli23957689lreflNM 153603.1|[23957689] gi|23957691|ref|NM 153604.1|[23957691] gl|23957695|ref|NM 153606.1|[23957695] gi|23957697|ref|NM\_153607.1|[23957697] gl|23957699|ref|NM\_153608.1|[23957699] gi|23957701|ref|NM\_153609.1|[23957701] gli32698779lreflNM 153610.2l[32698779] gil48976062lrefINM 153611.3lf48976062 gil45267823|ref|NM 153612,2|[45267823] gil23957707|ref|NM 153613.1|[23957707] gil39204546|ref|NM 153614,2|[39204546] gll23957679|ref|NM 153615.1|[23957679] gi|24234734|ref|NM 153616.1|[24234734] gi|24234737|ref|NM\_153617.1|[24234737] gi|24234740|ref|NM\_153618.1|[24234740] gi|24234743|ref|NM\_153619.1|[24234743] gl|24497508|ref|NM\_153620.1|[24497508] gil24497512|ref|NM 153631,1|[24497512] gil24497514|refINM 153632,1|[24497514] qi|24497539|ref|NM 153633.1|[24497539] gil38683845|ref|NM 153634.2|[38683845] gi|25121973|ref|NM 153635.1|[25121973] gi|25141327|ref|NM 153636.1|[25141327] gi|24430168|ref|NM\_153637.1|[24430168] gi|24430170|ref|NM\_153638.1|[24430170] gi|24430172|ref|NM\_153639.1|[24430172]

gi[23592229]ref[NM 153445.1][23592229]

gi|24430174|ref|NM\_153640.1|[24430174] gi|24430176|ref|NM\_153641.1|[24430176] gi|24497446|ref|NM\_153645.1|[24497446] gi|24111227|refINM 153646.1|[24111227] gi|29788984|refINM 153647.1|[29788984] gi|29788986|ref|NM\_153648.1|[29788986] gi|39725631|ref[NM\_153649.2|[39725631] gi|24497503|ref|NM\_153675.1|[24497503] gil41281807[ref[NM 153676.1][41281807] gi|24497596|ref|NM\_153681.1|[24497596] gi[24497598]ref[NM\_153682.1][24497598] gi|24497615|ref|NM\_153683.1|[24497615] gi|24497448|ref|NM\_153684.1|[24497448] gi[31559779]ref[NM\_153685.2][31559779] gi|34916053|ref|NM\_153686.4|[34916053] gi|24233516|ref|NM\_153687.1|[24233516] gi|24233531|ref|NM\_153688.1|[24233531] gij31581540|ref|NM\_153689.3|[31581540] gi|45333897|ref|NM\_153690.4|[45333897] gi|46049072|ref|NM\_153691.3|[46049072] gi[30410026]ref[NM\_153692.2][30410026] gij24497543[ref[NM\_153693.1][24497543] gil50345249[ref[NM\_153694.3][50345249] gi|46195795|ref|NM\_153695.2|[46195795] gij30410031|ref|NM\_153696.2|[30410031] gi|24233529|ref|NM\_153697.1|[24233529] gi|24308513|ref|NM\_153699.1|[24308513] gij31559780[ref]NM\_153700.2[[31559780] gi|24497439|ref|NM\_153701.1|[24497439] gi|24308455|ref|NM\_153702.1|[24308455] gij45505136|ref|NM\_153703.3|[45505136] gij42476194|ref|NM\_153704.3|[42476194] glj33859778[ref[NM\_153705.2][33859778] gil31559786|ref|NM 153706.2|[31559786] gil24308463[ref[NM\_153707.1][24308463] gi|24308421|ref|NM\_153708.1|[24308421] gil24308423[ref[NM\_153709.1][24308423] gij24308453[ref[NM\_153711.1][24308453] gi|42734436|ref|NM\_153712.3|[42734436] gi|24308457|ref|NM\_153713.1|[24308457] g||24308459|ref|NM\_153714.1|[24308459] g||24497550|ref|NM\_153715.1|[24497550] gij32526912|ref|NM 153716.1|[32526912] gi|24497530|ref|NM\_153717.1|[24497530] gi|34335247|ref|NM\_153718.2|[34335247] gi|34335248|ref|NM\_153719.2|[34335248] gi|24430134|ref|NM\_153741.1|[24430134] gi|34328938|ref|NM\_153742.3|[34328938] gij24371271|ref|NM\_153746.1|[24371271] gi|24430185|ref|NM\_153747.1|[24430185] gi|24497457|ref|NM\_153748.1|[24497457] gil24371249|ref|NM 153750.1|[24371249] gi|24371253|ref|NM\_153752.1|[24371253] gi|24371255|ref|NM\_153754.1|[24371255] gi|24371259|ref|NM\_153756.1|[24371259] gil24371267|refINM 153757.1|[24371267] gi[30795209]ref[NM\_153758.1][30795209]

gi|28559067|ref|NM\_153759.2|[28559067] gl|24497463|ref|NM\_153763.1|[24497463] gi|24497466|ref|NM\_153764.1|[24497466] gi|24497468|ref|NM\_153765.1|[24497468] gi|24497470|ref|NM\_153766.1|[24497470] gi|24497472|ref|NM\_153767.1|[24497472] gi|24797113|ref|NM\_153768.1|[24797113] gi|24797115|ref|NM\_153769.1|[24797115] gi|24797117|ref|NM\_153770.1|[24797117] gi|24415991|ref|NM\_153773.1|[24415991] gi|24429571|ref|NM\_153809.1|[24429571] gi|34222217|ref|NM\_153810.2|[34222217] gi|24429573|ref|NM\_153811.1|[24429573] gi|24432092|ref|NM\_153812.1|[24432092] gi|24429581|ref|NM\_153813.1|[24429581] gi[24797100]ref[NM\_153815,1][24797100] gi|39777616|ref|NM\_153816.2|[39777616] gi|24797088|ref|NM\_153818.1|[24797088] gi|24797102|ref|NM\_153819.1|[24797102] gl|25121957|ref|NM\_153822.1|[25121957] gi|24432099|ref|NM\_153823.1|[24432099] gi|24797094|ref|NM\_153824.1|[24797094] gi|24432103|ref|NM\_153825.1|[24432103] gi|27502403|ref|NM\_153826.2|[27502403] gi|27436916|ref|NM\_153827.2|[27436916] gi|47519507|ref|NM\_153828.2|[47519507] g||27886591|ref|NM\_153831.2|[27886591] gi|24476015|ref|NM\_153832.1|[24476015] gi|24475862|ref|NM\_153833.1|[24475862] gi|24475864|ref|NM\_153834.1|[24475864] gl[24475866]ref[NM\_153835.1][24475866] gl|24475868|ref|NM\_153836.1|[24475868] g[|24475870|ref|NM\_153837.1|[24475870] gi|24475872|ref|NM 153838.1|[24475872] gi|24475874|ref|NM 153839.1|[24475874] gi|24475876|ref|NM\_153840.1|[24475876] g[|24797134|ref|NM\_156036.1|[24797134] gi|24797136|ref|NM\_156037.1|[24797136] gi|27437041|ref|NM\_156038.2|[27437041] gi|27437043|ref|NM\_156039.2|[27437043] gi|41281804|ref|NM\_170587.1|[41281804] gi|24496784|ref|NM\_170589.1|[24496784] gi|41281820|ref|NM\_170600.1|[41281820] gi|47458051|ref|NM\_170601.3|[47458051] gl|26051253|ref|NM\_170602.1|[26051253] gi|26051255|ref|NM\_170603.1|[26051255] gi|26051257 ref|NM\_170604.1|[26051257] gi|29029543|ref|NM\_170605.2|[29029543] gi|24586652|ref|NM\_170606.1|[24586652] gi|38201610|ref|NM\_170607.2|[38201610] gi|25121983|ref|NM\_170609.1|[25121983] gi|28558999|ref|NM\_170610.2|[28558999] gi|34222218|ref|NM 170662,2|[34222218] gi|27436918|ref|NM\_170663.2|[27436918] gi|24638451|ref|NM\_170664.1|[24638451] gi|27886537|ref|NM\_170665.2|[27886537] gi|24762238|ref|NM\_170672.1|[24762238]

gi|27502376|ref|NM\_170674.2|[27502376] gi|27502377|ref|NM 170675,2|[27502377] gi|27502378|ref|NM\_170676.2|[27502378] gi|27502379|ref|NM 170677,2|[27502379] gi|24762247|ref|NM 170678,1|[24762247] gi|25777712|ref|NM 170679.1|[25777712] gi|25306282|ref|NM\_170681.1|[25306282] gi|28416917|ref|NM\_170682.2|[28416917] gi|28416918|ref|NM\_170683.2|[28416918] gi|26449156|ref|NM\_170685.1|[26449156] gi|25777703|ref|NM\_170686.1|[25777703] gi|25306286|ref|NM\_170691.1|[25306286] gi|25121935|ref|NM\_170692.1|[25121935] ail25168260/ref[NM\_170693.1][25168260] gi|25006531|ref|NM 170694.1|[25006531] gi|28178842|ref|NM 170695,2|[28178842] gi|25777725|ref|NM 170696.1|[25777725] gi|25777727|ref|NM\_170697.1|[25777727] gi|24850130|ref|NM\_170698.1|[24850130] gi|24850108|ref|NM\_170699.1|[24850108] gi|24797155|ref|NM\_170705.1|[24797155] gi|34335244|ref|NM\_170706.2|[34335244] gi|27436945|ref|NM\_170707.1|[27436945] gi|27436947|ref|NM\_170708.1|[27436947] gi|25168266|ref|NM\_170709.1|[25168266] gi|31317310|ref|NM\_170710.2|[31317310] gi|25470889|ref|NM\_170711.1|[25470889] gi|25777679|ref|NM\_170712.1|[25777679] gi|25777681|ref|NM\_170713.1|[25777681] gi|25777683|ref|NM\_170714.1|[25777683] gl|25777685|ref|NM\_170715.1|[25777685] gi|25777687|ref|NM\_170716.1|[25777687] gi|25777689|ref|NM\_170717.1|[25777689] gi|25777605|ref|NM\_170719.1|[25777605] gi|25777634|ref|NM 170720.1|[25777634] gi|25121992|ref|NM 170721.1|[25121992] gi|25777609|ref|NM 170722.1|[25777609] gil25453480|ref|NM\_170723.1|[25453480] gil25777666|ref|NM\_170724.1|[25777666] gli25777741|ref|NM\_170725.1|[25777741] gil25777735[ref]NM\_170726.1][25777735] gi|34106706|ref|NM\_170731.2|[34106706] gil34106707|refINM 170732,2|[34106707] gil34106708/refINM 170733.2/[34106708] gi/34106709/ref/NM 170734.21[34106709] gi|34170263|ref|NM\_170735.3|[34170263] gi|25777637|ref|NM\_170736.1|[25777637] gi|25777639|ref|NM\_170737.1|[25777639] gi|25306271|ref|NM\_170738.1|[25306271] gi|25306274|ref|NM\_170739.1|[25306274] gi|25777720|ref|NM\_170740.1|[25777720] gi|25777627|ref|NM\_170741.1|[25777627] gi|25777629|ref|NM\_170742,1|[25777629] gi|28416903|ref|NM\_170743.2|[28416903] gi|32261317|ref|NM\_170744.2|[32261317] gi|29171724|ref|NM 170745,2|[29171724] gi|46370090|ref|NM\_170746.2|[46370090]

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gi|28605136|ref|NM 170750.1|[28605136] gi|25777618|ref|NM 170751.1|[25777618] gi|25777620|ref|NM 170752.1|[25777620] gi|25777743|ref|NM 170753.1|[25777743] gi|38787956|ref|NM 170754.2|[38787956] gi|25777700|ref|NM 170768.1|[25777700] gi|25777715|ref|NM 170769.1|[25777715] gi|25777717|ref|NM\_170770.1|[25777717] gi|25952151|ref|NM\_170771.1|[25952151] gi|25777674|ref|NM\_170773.1[[25777674] gi|25777676|ref|NM\_170774.1|[25777676] gi|25777646|ref|NM\_170775.1|[25777646] gi|40538803|ref|NM\_170776.3|[40538803] gi|41327723|ref|NM\_170780.2|[41327723] gi|25777672|ref|NM 170781.1|[25777672] gi|25777649|ref|NM\_170782.1|[25777649] gi|25777706|ref|NM\_170783.1|[25777706] gi|25914753|ref|NM\_170784.1|[25914753] gi|25952117|ref|NM\_171825.1|[25952117] gi|27886641|ref|NM\_171827.1|[27886641] gi|25952098|ref|NM\_171828.1|[25952098] gl|25952101|ref|NM\_171829.1|[25952101] ail25952104lreflNM 171830.1li259521041 all 26051232 | refINM 171846.1 | [26051232] gi|25777693|ref|NM 171982.1|[25777693] gi|28565284|ref|NM\_171997.1|[28565284] gij25188192|ref|NM 171998.1|[25188192] gi|25188194|ref|NM\_171999.1|[25188194] gi|25188188|ref|NM 172000,1|[25188188] gi|50301233|ref|NM\_172002.3|[50301233] gli38016203lreflNM 172003.2lf380162031 gil40548404lreflNM 172004.2lf405484041 gil25188180|ref|NM 172005,1|[25188180] gl|31563539|ref|NM\_172006,2|[31563539] gil25952146|ref|NM 172014.1|[25952146] gi|25777697|ref|NM\_172016.1|[25777697] gi|26051277|ref|NM\_172020.1|[26051277] gi|25952070|ref|NM 172024.1|[25952070] gi|25952073|ref|NM\_172025.1|[25952073] gi|25952076|ref|NM\_172026.1|[25952076] gl|25777623|ref|NM\_172027.1|[25777623] gl|25777625|ref|NM\_172028.1|[25777625] gi|46048189|ref|NM\_172037.2|[46048189] gi|26051270|ref|NM\_172056.1|[26051270] gil26051272|reflNM 172057,1|[26051272] gil26667215|ref|NM 172058.1|[26667215] gi|26667218|ref|NM 172059.1|[26667218] gi|26667221|ref|NM 172060.1|[26667221] gi|45120120|ref|NM 172069.1|[45120120] gi|40255162|ref|NM\_172070.2|[40255162] gi|26051205|ref|NM\_172078.1|[26051205] gi|26051207|ref|NM\_172079.1|[26051207] ail26051209lreflNM 172080.1lf260512091 ail26051211lrefINM 172081.1lf260512111 ail26051213lrefINM 172082.1|[26051213] gi|26051215|ref|NM 172083.1|[26051215] gi|26051217|ref|NM 172084.1|[26051217]

gi|26051245|ref|NM\_172087.1|[26051245] gi|26051247|ref|NM 172088,1|[26051247] gi|47519573|ref|NM 172089,2|[47519573] gi|26051222|ref|NM 172095.1|[26051222] gi|26051224|ref|NM 172096.1|[26051224] gi|26051226|ref|NM\_172097.1|[26051226] gi|26667245|ref|NM\_172098.1|[26667245] gi|27886630|ref|NM\_172099.1|[27886630] gi|27886632|ref|NM\_172100.1|[27886632] gi|27886634|ref|NM\_172101.1|[27886634] gi|27886636|ref|NM\_172102.1|[27886636] gij26667251/refINM 172103.11[26667251] ail26667254|ref|NM\_172104.1|[26667254] ail26667256|ref|NM\_172105.1|[26667256] gi|26051261|ref|NM 172106.1|[26051261] gi|26051263|ref|NM\_172107.1|[26051263] gi|26051265|ref|NM\_172108.1|[26051265] gl|26051267|ref|NM\_172109.1|[26051267] gi|26667229|ref|NM 172110.1|[26667229] gl|26667231|ref|NM\_172111.1|[26667231] gi|26667234|ref|NM\_172112.1|[26667234] gi|26667239|ref|NM\_172113.1|[26667239] gl|26667182|ref|NM\_172115.1|[26667182] gi|26667185|ref|NM\_172127.1|[26667185] gi|26667188|ref|NM\_172128.1|[26667188] gi|27436968|ref|NM\_172130.1|[27436968] gi|31563540|ref|NM 172131,2|[31563540] gi|26024320|ref|NM\_172138.1|[26024320] gi|28144900|ref|NM\_172139.2|[28144900] gi|26024324|ref|NM\_172140.1|[26024324] gi|46255024|ref|NM\_172159.2|[46255024] gi|27436965|ref|NM\_172160.1|[27436965] gij26638654|ref|NM 172163,1|[26638654] gij27262633|ref|NM 172164,1|[27262633] gi|26638663|ref|NM 172165,1|[26638663] gli26638665|ref|NM\_172166.1|[26638665] gi|41281810|ref|NM\_172167.1|[41281810] gi|41281827|ref|NM\_172168.1|[41281827] gi|26667195|ref|NM\_172169.1|[26667195] gil40354202 refiNM 172170.2 [40354202] gi/26667202/refINM 172171.1/[26667202] gi|26667205|ref|NM 172172.1|[26667205] gij26667210[ref]NM\_172173.1][26667210] gi|26787983|ref|NM 172174.1|[26787983] gil26787985[ref[NM\_172175.1][26787985] gil26667170|ref|NM\_172177.1|[26667170] gi|26667173|ref|NM\_172178.1|[26667173] gi|26190615|ref|NM\_172193.1|[26190615] gi|41281816|ref|NM\_172195.1|[41281816] gi|26787965|ref|NM\_172196.1|[26787965] gi|26787961|ref|NM\_172197.1|[26787961] gi|27436985|ref|NM 172198,1|[27436985] gi|26665890|ref|NM 172199.1|[26665890] gi|26787981|ref|NM 172200.1|[26787981] gi|27436977|ref|NM\_172201.1|[27436977] gi|27437010|ref|NM\_172206.1|[27437010] gi|27437012|ref|NM\_172207.1|[27437012]

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gi|27436894|ref|NM\_172208.1|[27436894] gi|27436896|ref|NM\_172209.1|[27436896] gi|27262662|ref|NM\_172210.1|[27262662] gil27262664lreflNM 172211.1I[27262664] gil27262666lreflNM 172212.11[27262666] gil27886638lrefINM 172213.1I[27886638] gi|27437020|ref|NM\_172214.1|[27437020] gi|27437022|ref|NM\_172215.1|[27437022] gi|27437024|ref|NM\_172216.1|[27437024] gi|27262656|ref|NM\_172217.1|[27262656] gi|27262637|ref|NM\_172218.1|[27262637] gi|27437048|ref|NM\_172219.1|[27437048] gi[27437050]ref[NM\_172220.1][27437050] gi|27436935|ref|NM\_172225.1|[27436935] gi|27437026|ref|NM\_172226.1|[27437026] gi|27437007|ref|NM\_172229.1|[27437007] gi|27436926|ref|NM\_172230.1|[27436926] gil33469963|ref|NM 172231.2|[33469963] gi|27262625|ref|NM 172232.1|[27262625] gl|27477075|ref|NM 172234.1|[27477075] gi|27436890|ref|NM 172236.1|[27436890] gi|27363485|ref|NM\_172238.1|[27363485] ail26665874|ref|NM\_172239.1|[26665874] gi|26665868|ref|NM\_172240.1|[26665868] gi|26665878|ref|NM\_172241.1|[26665878] gil27262640|ref|NM 172242,1|[27262640] gil46249399lreflNM 172244,21[46249399] gli27437031|reflNM 172245,1|i274370311 gil27437033|refINM 172246,1||27437033| gi|27437035|ref|NM\_172247.1|[27437035] gi|27437037|ref|NM 172248.1|[27437037] gl|27437039|ref|NM 172249.1|[27437039] gi|26892294|ref|NM\_172250.1|[26892294] gi|27436907|ref|NM\_172251.1|[27436907] gi|29553943|ref|NM\_172311.1|[29553943] gi|27502372|ref|NM\_172312.1|[27502372] gi|27437044|ref|NM\_172313.1|[27437044] gi|27477080|ref|NM\_172314.1|[27477080] gil27502380|reflNM 172315,1|[27502380] gll27502382|reflNM 172316.1|[27502382] gi|27436989|ref|NM 172318.1|[27436989] gi|27436932|ref|NM 172337.1|[27436932] gl|28144919|ref|NM\_172341.1|[28144919] gi|27477083|ref|NM\_172343.1|[27477083] gi|27436992|ref|NM\_172344.1|[27436992] gi|27436921|ref|NM\_172345.1|[27436921] gil27436954|refINM 172346,1|[27436954] gil27436995|ref|NM 172347,1|[27436995] gil27477091|ref|NM 172348,1|[27477091] gil27477094|reflNM 172349.1|[27477094] gi|27502404|ref|NM 172350.1|[27502404] gij27502406|ref|NM 172351.1|[27502406] gi|27502408|ref|NM 172352.1|[27502408] gi|27502410|ref|NM\_172353.1|[27502410] ail27502412|refINM 172354,1|[27502412] gi|27502414|ref|NM\_172355.1|[27502414] gil27502416|ref|NM 172356,1|[27502416]

gil27502418|refINM 172357.1|[27502418] gi|27502420|ref|NM 172358.1|[27502420] gil27502422|refINM 172359.1|[27502422] gi|27502424|ref|NM 172360.1|[27502424] gi|27502426|ref|NM 172361.1|[27502426] gi|27437000|ref|NM 172362.1|[27437000] gi|33589828|ref|NM 172364.2|[33589828] gi|27312028|ref|NM 172365.1|[27312028] gi|30089920|ref|NM 172366.2|[30089920] gi|27312030|ref|NM\_172367.1|[27312030] gi|27363487|ref|NM\_172369.1|[27363487] gi|48843726|ref|NM\_172370.2|[48843726] gi|34222093|ref|NM 172373,2|[34222093] gil27477088|ref|NM 172374,1|[27477088] gi|27886645|ref|NM 172375.1|[27886645] gi|27886647|ref|NM 172376.1|[27886647] gi|50428920|ref|NM 172377.2|[50428920] gi|27477116|ref|NM 172386.1|[27477116] gi|27502385|ref|NM\_172387.1|[27502385] gi|27502387|ref|NM\_172388.1|[27502387] gi|27502390|ref|NM\_172389.1|[27502390] gi|27502392|ref|NM\_172390.1|[27502392] gl|27370564|ref|NM\_173039.1|[27370564] gl|27502395|ref|NM\_173042.1|[27502395] gi|27502397|ref|NM\_173043.1|[27502397] gi|27502399|ref|NM\_173044.1|[27502399] gi|27413157|ref|NM\_173050.1|[27413157] gi|27436939|ref|NM\_173054.1|[27436939] gi|27881485|ref|NM\_173055.1|[27881485] gi|27881487|ref|NM\_173056.1|[27881487] gi|27881489|ref|NM\_173057.1|[27881489] gi|27881491|ref|NM\_173058.1|[27881491] gl|27881493|ref|NM\_173059.1|[27881493] gi|27765084|ref|NM\_173060.1|[27765084] gli27765086ireflNM 173061.1l[27765086] gi|27765088|ref|NM 173062,1|[27765088] gi|28416908|ref|NM 173064.1|[28416908] gi|28416910|ref|NM 173065.1|[28416910] gl|34335286|ref|NM 173073.2|[34335286] gi|27894290|ref|NM\_173074,1|[27894290] gl|50083290|ref|NM\_173075.2|[50083290] ali30795237lrefiNM 173076.2lf307952371 ali27436870lrefINM 173077.11[27436870] gi|40217821|ref|NM 173078,2|[40217821] gli27436874lrefINM 173079.11[27436874] gi|27436868|ref|NM\_173080.1|[27436868] gi|27436878|ref|NM\_173081.1|[27436878] gi|27436872|ref|NM 173082,1|[27436872] gi|32996736|ref|NM\_173083.2|[32996736] gi|27436876|ref|NM\_173084.1|[27436876] gi|31343353|ref|NM\_173086.2|[31343353] gi|27765073|ref|NM\_173087.1|[27765073] gi|27765075|ref|NM\_173088.1|[27765075] gi|27765077|ref|NM\_173089.1|[27765077] gi|27765079|ref|NM 173090,1|[27765079] gi|27886540|ref|NM 173091.1|[27886540] gi|27886650|ref|NM\_173092,1|[27886650]

gi|42475557|ref|NM 173156.1|[42475557] gi|27894343|ref|NM\_173157.1|[27894343] gi|27894345|ref|NM 173158.1|[27894345] gi[41281830|ref[NM 173159.1|[41281830] gij50659101|ref|NM 173160,2|[50659101] gi|27894306|ref|NM\_173161,1|[27894306] gi|27886664|ref|NM\_173162.1|[27886664] gi|27886554|ref|NM\_173163.1|[27886554] gi|27886558|ref|NM\_173164.1|[27886558] gi|27886560|ref|NM\_173165.1|[27886560] gij27477060|refINM 173167.1|[27477060] gil27894309|ref|NM 173170.1|[27894309] gi|27894348|ref|NM 173171.1|[27894348] gi|27894350|ref|NM 173172.1|[27894350] gi|27894352|ref|NM 173173,1|[27894352] gi|27886585|ref|NM 173174,1|[27886585] gi|27886587|ref|NM\_173175.1|[27886587] gi|27886589|ref|NM\_173176.1|[27886589] gi|27894372|ref|NM\_173177.1|[27894372] glj27894312|ref|NM\_173178.1|[27894312] gi|34335288|ref|NM\_173179.2|[34335288] gi|50557653|ref|NM\_173191.2|[50557653] gi|50557649|ref|NM\_173192.2|[50557649] gl|50557655|ref|NM\_173193.2|[50557655] gl|50557651|ref|NM\_173194.2|[50557651] gi|50557650|ref|NM\_173195.2|[50557650] gi|50557652|ref|NM\_173197.2|[50557652] gl|27894356|ref|NM\_173198.1|[27894356] gl|27894358|ref|NM\_173199.1|[27894358] gi|27894360|ref|NM\_173200.1|[27894360] gi|47132613|ref|NM\_173201.2|[47132613] gi|27894295|ref|NM\_173202.1|[27894295] gi|27894297|ref|NM\_173203.1|[27894297] gi|27894299|ref|NM\_173204.1|[27894299] gi|27894301|ref|NM 173205.1|[27894301] glj27532983|ref|NM 173206.1|[27532983] gi|28178844|ref|NM\_173207.1|[28178844] gi|28178848|ref|NM\_173208.1|[28178848] gi|28178850|ref|NM\_173209.1|[28178850] gl|28178852|ref|NM\_173210.1|[28178852] gil28178854lrefINM 173211.1I[28178854] gli27894340lreflNM 173213.11[27894340] gl|27886523|ref|NM 173214.1|[27886523] gi|27886525|ref|NM\_173215.1|[27886525] gi|27765090|ref|NM\_173216.1|[27765090] gi|27765092|ref|NM 173217.1|[27765092] gi|27894286|ref|NM 173341.1|[27894286] gi|50593104|ref|NM\_173342.2|[50593104] gi|27894333|ref|NM\_173343.1|[27894333] gi|27765095|ref|NM\_173344.1|[27765095] gi|50051734|ref|NM\_173351.1||50051734| gil27597103|refINM 173352.1|[27597103] gil31795562|refINM 173353,2|[31795562] gil48762713|refINM 173354.2|[48762713] gi|34222223|ref|NM 173355.2||342222231 gi|28559018|ref|NM 173357.2|[28559018] gi|28559019|ref|NM\_173358.2|[28559019]

gi|50659063|ref|NM 173360,2|[50659063] gi|40255164|ref|NM 173362,2|[40255164] gi|27754777|ref|NM 173452.1|[27754777] gi|47132536|ref|NM 173454.1|[47132536] gi|47132538|ref|NM\_173455.1|[47132538] gi|47132540|ref|NM\_173456.1|[47132540] gi|47132542|ref|NM\_173457.1|[47132542] gi|27894325|ref|NM\_173459.1|[27894325] gi[37704383]ref[NM\_173460.1][37704383] gi|50083294|ref|NM 173462,2|[50083294] gil33186919|ref|NM 173463,2|[33186919] gi|28212273|ref|NM 173464,1|[28212273] gi|29725623|ref|NM 173465.2|[29725623] gi|27735032|ref|NM 173466.1|[27735032] gi|29648316|ref|NM 173467.2|[29648316] gi|41406062|ref|NM\_173468.2|[41406062] gi|29789400|ref|NM\_173469.1|[29789400] gil27735036lrefINM 173470.11[27735036] gi|27735034|refINM 173471.1|[27735034] gi|27735040|ref|NM\_173472.1|[27735040] gi|50234894|ref|NM\_173473.2|[50234894] gi|40789088|ref|NM\_173474.2|[40789088] gi|27735046|ref|NM\_173475.1|[27735046] gi|40255165|ref|NM\_173476,2|[40255165] gi|34304382|ref|NM\_173477.2|[34304382] gi|27735056|ref|NM\_173478.1|[27735056] gi|47271480|ref|NM\_173479.2|[47271480] gi|28315872|ref|NM\_173480.1|[28315872] gi|34222226|ref|NM\_173481.2|[34222226] gi|27735062|ref|NM\_173482.1|[27735062] gi|27735072|ref|NM\_173483.1|[27735072] gi|31377545|ref|NM\_173484.2|[31377545] gi|40255167|ref|NM 173485,2|[40255167] gi|42734389|ref|NM 173486.1|[42734389] gi|27735074|ref|NM 173487.1|[27735074] gl|30520362|ref|NM 173488,2|[30520362] ali38564324|ref|NM\_173489.2|[38564324] gi|42476211|ref|NM\_173490,4|[42476211] gi|27735088|ref|NM\_173491.1|[27735088] gli27735084lrefINM 173492.1I[27735084] gil27735094lrefINM 173493.1I[27735094] gil33859792|ref|NM 173494,1|[33859792] gi|27735090|ref|NM 173495,1|[27735090] gi|34222227|ref|NM\_173496.2|[34222227] gi|27735098|ref|NM 173497.1|[27735098] gi|47564113|ref|NM 173499.2|[47564113] gi|28466990|ref|NM\_173500.2|[28466990] gi|27735108|ref|NM\_173501.1|[27735108] gi|27735116|ref|NM\_173502.1|[27735116] gi|27735112|ref|NM\_173503.1|[27735112] gi|27735120|ref|NM\_173505.1|[27735120] gil40255169|ref|NM 173506.3|[40255169] gil27735128|ref|NM 173507.1|[27735128] gi|27735126|ref|NM 173508.1|[27735126] gi|34222229|ref|NM 173509.2|[34222229] gi|27735132|ref|NM\_173510.1|[27735132] gi|27735130|ref|NM\_173511.1|[27735130]

gi|27735136|ref|NM 173512.1|[27735136] gi|34222230|ref|NM 173513.2|[34222230] gi|27735148|ref|NM 173514.1|[27735148] gi|27735138|ref|NM 173515.1|[27735138] gi|27735154|ref|NM\_173516.1|[27735154] gi|47717107|ref|NM 173517.3|[47717107] gi|40255171|ref|NM 173518.2|[40255171] gi|27734848|ref|NM\_173519.1|[27734848] gi|27734942|ref|NM\_173521.1|[27734942] gi|27734962|ref|NM\_173522.1|[27734962] gil29337289lreflNM 173523.21[29337289] gi|40255173|ref|NM 173524,2|[40255173] gi|27734960|ref|NM 173525.1|[27734960] gi|27734950|ref|NM 173526.1|[27734950] gi|27734952|ref|NM 173527.1|[27734952] gi|27734946|ref|NM\_173528.1|[27734946] gi|40255175|ref|NM\_173529.3|[40255175] gi|27734940|ref|NM\_173530.1|[27734940] gi|27734944|ref|NM\_173531.1|[27734944] gi|27734936|ref|NM\_173532.1|[27734936] gi|40255177|ref|NM\_173533.2|[40255177] gi|47778939|ref|NM\_173535.2|[47778939] g||31742489|ref|NM\_173536.2|[31742489] gi|48762699|ref|NM\_173537.2|[48762699] gi|27734928|ref|NM\_173538.1|[27734928] gi|27734918|ref|NM\_173539.1|[27734918] gi|27734920|ref|NM\_173540.1|[27734920] gi|27734914|ref|NM\_173541.1|[27734914] gi|37059775|ref|NM\_173542.2|[37059775] gi|27734910|ref|NM\_173543.1|[27734910] gl|31542206|ref|NM\_173544.2|[31542206] gi|27734904|ref|NM\_173545.1|[27734904] gil27734908|ref|NM 173546.1|[27734908] gil38679904|ref|NM 173547.2|[38679904] glj27734902|ref|NM 173548.1|[27734902] ali27734896|ref|NM\_173549.1|[27734896] gi|38348728|ref|NM\_173550.2|[38348728] gil27734888|ref|NM\_173551.1|[27734888] gi|34222231|ref|NM\_173552.2|[34222231] gil27734882lreflNM 173553.1l[27734882] gil27734884lrefINM 173554.1I[27734884] gil27734876|ref|NM 173555,1|[27734876] gi|40255179|ref|NM\_173556.2|[40255179] gil27734872|ref|NM 173557.1|[27734872] gi|34222232|ref|NM\_173558.2|[34222232] gi|27734868|ref|NM\_173559.1|[27734868] gi|27734870|ref|NM\_173560.1|[27734870] gi|27734864|ref|NM\_173561.1|[27734864] gi|40255181|ref|NM\_173562.3|[40255181] gi|27734860|ref|NM\_173563.1|[27734860] gi|37537553|ref|NM\_173564.2|[37537553] gil27734854|ref|NM 173565.1|[27734854] gil27734856[ref]NM 173566.1[[27734856] gi|31542788|ref|NM 173567.2|[31542788] gi[27734852]ref[NM\_173568.1][27734852] gi|50234885|ref|NM\_173570.2|[50234885] gil27734834|ref|NM\_173571.1|[27734834]

gi|27734836|ref|NM\_173572.1|[27734836] gi|27734828|ref|NM\_173573.1|[27734828] gi|27734832|ref|NM\_173574.1|[27734832] gi|32455268|ref|NM\_173575.2|[32455268] gi|27734826|ref|NM 173576,1|[27734826] gij27734820|reflNM 173578.1|[27734820] gi|27734812|ref|NM 173579.1|[27734812] gi|27734816|ref|NM\_1 73580.1|[27734816] gi|27734806|ref|NM 173581.1|[27734806] gi|31377547|ref|NM 173582.2|[31377547] gil27734800[ref[NM\_173583.1][27734800] gi|27734804|ref|NM\_173584.1|[27734804] gi|27734796|ref|NM\_173586.1|[27734796] gi|34222235|ref|NM\_1 73587.2|[34222235] gi|27734790|ref|NM\_1 73588.1|[27734790] gi|42761478|ref|NM 173589.2|[42761478] gi|27734786|ref|NM 173590.1|[27734786] gi|27734788|ref|NM 173591.1|[27734788] gl|38566691|ref|NM 173593.2|[38566691] gi|27734776|ref|NM 173596.1|[27734776] gi|27734768|ref|NM\_173597.1|[27734768] gi|34222392|ref|NM\_173598.2|[34222392] gi|27734764|ref|NM\_1 73599.1|[27734764] gi|27734696|ref|NM\_1 73605.1|[27734696] gi|31377542|ref|NM\_1 73607.2|[31377542] gi|27734692|ref|NM\_1 73608.1|[27734692] gil27734694|ref|NM 173609,1|[27734694] gil27734706|ref|NM 173610,1|[27734706] gi|27734702|ref|NM 173611.1|[27734702] gi|28212275|ref|NM 1 73613,1|[28212275] gi|27734708|ref|NM 1 73614,1|[27734708] gi|27734712|ref|NM\_1 73616.1|[27734712] gi|27734731|ref|NM\_1 73617.1|[27734731] gi|27734726|ref|NM\_1 73618.1|[27734726] gi|27734735|ref|NM\_1 73619.1|[27734735] gil27734733irefiNM 1 73620.1[[27734733] gi|27734741|ref|NM 1 73621.1|[27734741] gi|27734737|ref|NM 173622.1|[27734737] gi|27734745|ref|NM\_1 73623.1|[27734745] gi|27734743|ref|NM\_173624.1|[27734743] gi|45580703|ref|NM\_1 73625.3|[45580703] gi|27734747|ref|NM\_1 73626,1|[27734747] gli31542774[ref]NM\_173627.2][31542774] gi|27734756|ref|NM 173628,1|[27734756] gil27734982|ref|NM 173629,1|[27734982] gil38201695|ref|NM 1 73630,2|[38201695] gil38044285|ref|NM 1 73631,2|[38044285] gil40255187lreflNM 1 73632,2l[40255187] gi|27734988|ref|NM 173633,1|[27734988] gi|27735026|ref|NM 173635.1|[27735026] gi|50080220|ref|NM 173636.3|[50080220] gi|27735042|ref|NM\_1 73637.1|[27735042] gi|31341145|ref|NM\_173638.2|[31341145] gi|27735030|ref|NM 173639.1|[27735030] gi|27735060|ref|NM\_173640.1|[27735060] gil27735058|ref|NM 173641.1|[27735058] gil27735068|ref|NM 173642.1|[27735068]

gi|27735064|ref|NM\_173643.1|[27735064] gi|27735086|ref|NM\_173644.1|[27735086] gi|27735076|ref|NM 173645.1|[27735076] gi|27735096|ref|NM\_173646.1|[27735096] gi|31543079|ref|NM 173647,2|[31543079] gi|39725716|ref|NM 173648,2|[39725716] gi|27735114|ref|NM 173649.1|[27735114] gi|27735106|ref|NM\_173650.1|[27735106] gi|27734956|ref|NM\_173651.1|[27734956] gi|27734974|ref|NM\_173652.1|[27734974] gi|27734934|ref|NM\_173653.1|[27734934] gi|39930530|ref|NM\_173654.1|[39930530] gi|27734906|ref|NM\_173656.1|[27734906] gi|27734924|ref|NM\_173657,1|[27734924] gi|28212277|ref|NM\_173658.1|[28212277] ail27734886lref[NM\_173659.1][27734886] gi|31542769|ref|NM\_173660.2|[31542769] gi|27734842|ref|NM 173661,1|[27734842] gl|27734858|ref|NM 173662.1|[27734858] gi|28395040|ref|NM\_173663.1|[28395040] gi|46195790|ref|NM\_173664.3|[46195790] gi|27734814|ref|NM\_173665.1|[27734814] gl|27734778|ref|NM\_173666.1|[27734778] gi|27734794|ref|NM\_173667.1||27734794| gi|27734690|ref|NM\_173669.1|[27734690] gi|27734739|ref|NM\_173670.1|[27734739] gl|27734722|ref|NM\_173671.1|[27734722] gi|27735044|ref|NM\_173672.1|[27735044] gi|27735001|ref|NM\_173673.1|[27735001] gi|27735142|ref|NM\_173674.1|[27735142] gl|27735140|ref|NM\_173675.1|[27735140] gi|27734926|ref|NM\_173676.1|[27734926] gi|27734968|ref|NM\_173677.1|[27734968] gi|27734978|ref|NM\_173678.1|[27734978] gl|34222238|ref|NM\_173680.2|[34222238] gi|27734980|ref|NM\_173682.1|[27734980] gi|34222239|ref|NM\_173683.2|[34222239] gi|27734760|ref|NM 173685.1|[27734760] gl|27735122|ref|NM\_173687.1|[27735122] gi|27734999|ref|NM\_173688.1|[27734999] gi|46391097|ref|NM\_173689.3|[46391097] gi|27735124|ref|NM\_173690.1|[27735124] gi|27734964|ref|NM\_173691.1|[27734964] gil40316838lreflNM 173694.2li403168381 gil27734890|ref|NM 173695.1|[27734890] gi|27734774|refINM 173698.1|[27734774] gi|27734780|ref|NM\_173699.1|[27734780] gi|28316807|ref|NM 173700.1|[28316807] gi|47419915|ref|NM 173701.1|[47419915] gi|32307165|ref|NM 173728,2|[32307165] gi|31341089|ref|NM 173791,2|[31341089] gi|31341095|ref|NM\_173793.2|[31341095] gi|31341096|ref|NM\_173794.2|[31341096] gi|31341099|ref|NM\_173795.2|[31341099] gi|31341107|ref|NM\_173797.2|[31341107] gi|31341108|ref|NM 173798,2|[31341108] gi|31341110|ref|NM 173799.2|[31341110]

WC05044981 [file:///E:/WC05044981.opc]

gi|46397360|ref|NM\_173800.3|[46397360] gi|42476002|ref|NM\_173801.3|[42476002] gi|31341117|ref|NM\_173802.2|[31341117] gi|31341122|ref|NM\_173803.2|[31341122] gi|31560865|ref|NM\_173804.3|[31560865] gi|31341123|ref|NM\_173805.2|[31341123] gij31341127 refiNM 173806, 21[31341127] gil31341128|ref|NM 173807,2|[31341128] gi|27754173|ref|NM 173808.1|[27754173] gi|46852397|ref|NM 173809,2|[46852397] gi|34222234|ref|NM 173810.3|[34222234] gi|31341135|ref|NM 173811.2|[31341135] gi|40255183|ref|NM\_173812.3|[40255183] gi|31341139|ref|NM\_173813.2|[31341139] gi|40255185|ref|NM\_173815.3|[40255185] gi|28376647|ref|NM\_173821.1|[28376647] gij28376657[refINM 173822.1][28376657] gi|34222236|ref|NM 173824,2|[34222236] gi|28376659|ref|NM 173825.1|[28376659] gl|28376649|ref|NM\_173826.1|[28376649] gi|28395048|ref|NM\_173827.1|[28395048] gl|40255189|ref|NM\_173828.3|[40255189] gi|31341149|ref|NM\_173829.2|[31341149] gli34222237[ref]NM\_173830.3[[34222237] gi|31341152|ref|NM\_173831.2|[31341152] gil31341155|ref|NM 173832,2|[31341155] gil47271476lreflNM 173833.3l[47271476] gi|31341159|ref|NM\_173834.2|[31341159] gi|27894316|ref|NM\_173841.1|[27894316] gi|27894318|ref|NM\_173842.1|[27894318] gi|27894320|ref|NM 173843.1|[27894320] gl|27886565|ref|NM 173844.1|[27886565] gi|34222240|ref|NM\_173846.3|[34222240] gi|31341185|ref|NM\_173847.2|[31341185] gi|40255191|ref|NM\_173848.3|[40255191] gl|29171761|ref|NM\_173849.2|[29171761] gi|31341191|ref|NM\_173850.2|[31341191] gil27777666[refINM 173851.1][27777666] gli31341196|ref|NM 173852,2|[31341196] gli31341197lreflNM 173853,2li313411971 gil40255193|ref|NM 173854,3|[40255193] gij50355989|ref|NM 173855.3|[50355989] gi|27777672|ref|NM 173856.1|[27777672] gi|27777668|ref|NM\_173857.1|[27777668] gi[27777674]ref[NM\_173858.1][27777674] gi[28372506]ref[NM\_173859.1][28372506] gi|278O4314|ref|NM\_173860.1|[27804314] gi|41281845|ref|NM\_173872.1|[41281845] gi|28178815|ref|NM\_174855.1|[28178815] gi|28178818|ref|NM\_174856.1|[28178818] gi|28144896|ref|NM 174858.1|[28144896] gi|28178837|ref|NM 174869.1|[28178837] gi|28872764|ref|NM 174871.1|[28872764] gi|284 16 920|ref|NM\_174872.1|[28416920] gi|284 1 6922|ref|NM\_174873.1|[28416922] gi|37622908|ref|NM\_174878.2|[37622908] gi|28144911|ref|NM\_174880.1|[28144911]

gi|28144894|ref|NM 174882,1|[28144894] gi|28178856|ref|NM 174886,1|[28178856] gi|34222241|ref|NM 174887,2|[34222241] gi|31341340|ref|NM 174889,2|[31341340] gi|28376663|ref|NM\_174890.1|[28376663] gi|31341349|ref|NM\_174891.2|[31341349] gi|28461132|ref|NM\_174892.1|[28461132] gi|31341350|ref|NM\_174896.2|[31341350] gi|28372524|ref|NM\_174897.1|[28372524] ail28372526|ref|NM\_174898.1|[28372526] gil31343457[ref]NM\_174899.3[[31343457] gil42476270[ref]NM\_174900.2[[42476270] gil31341354|ref|NM 174901,2|31341354] gil31341355|ref|NM 174902,2|[31341355] gi|37537698|ref|NM 174905,2|[37537698] gi|28376665|ref|NM 174906.1|[28376665] gi|28372530|ref|NM 174907.1|[28372530] gi|33186926|ref|NM\_174908.2|[33186926] gi|28372532|ref|NM\_174909.1|[28372532] gi|28372534|ref|NM\_174910.1|[28372534] gi|40255195|ref|NM\_174911.3|[40255195] gi|30410024|ref|NM\_174912.2|[30410024] gl|28212271|ref|NM\_174913.1|[28212271] gi|31341368|ref|NM\_174914.2|[31341368] gi|28372496|ref|NM\_174916.1|[28372496] gi|28372536|ref|NM\_174917.1|[28372536] gl 27885012|ref|NM\_174918.1|[27885012] gi|31341380|ref|NM\_174920.2|[31341380] gi|28372538|ref|NM\_174921.1|[28372538] gi|41393592|ref|NM\_174922.3|[41393592] gi|28316809|ref|NM\_174923.1|[28316809] gi|28372542|ref|NM\_174924.1|[28372542] gi|28372544|ref|NM\_174925.1|[28372544] gi|28376667|ref|NM\_174926.1|[28376667] ali28376651|ref|NM\_174927.1|[28376651] gil28372546|ref|NM\_174928.1|[28372546] gi|31341385|ref|NM\_174930.2|[31341385] gil28395050|ref|NM\_174931.1|[28395050] gl|28372550|ref|NM\_174932.1|[28372550] gl|34222242|ref|NM\_174933.2|[34222242] gi|28372554|ref|NM\_174934.1|[28372554] gi|31317306|ref|NM\_174936.2|[31317306] gi|28372558|ref|NM\_174937.1|[28372558] gil34222248lreflNM 174938.3lf342222481 gi|31341399|ref|NM 174939.2|[31341399] gi|28372560|ref|NM\_174940.1|[28372560] gi[50659090|ref|NM\_174941.3|[50659090] gi|28372562|ref|NM 174942.1|[28372562] gil31341411[ref|NM\_174943.2][31341411] gi|42734400|ref|NM\_174944.2|[42734400] gi|28372566|ref|NM\_174945.1|[28372566] gi|29126235|ref|NM\_174947.2|[29126235] gi|31340828|ref|NM 174950,2|[31340828] gi|31343340|ref|NM 174951,2|[31343340] gi|33457323|ref|NM 174952.1|[33457323] gi|28373104|ref|NM\_174953.1|[28373104]

gi|28144892|ref|NM\_174881.1|[28144892]

gi|28373106|ref|NM\_174954.1|[28373106] gi|28373108|ref|NM\_174955.1|[28373108] gil28373110|refINM 174956.1|[28373110] gil28373112|refINM 174957.1|[28373112] gil28373114|refINM 174958,1|[28373114] gil33457321|reflNM 174959.1|[33457321] gi|31581528|ref|NM\_174961.2|[31581528] gi[31581525|ref|NM\_174962.2|[31581525] gi|28373067|ref|NM\_174963.1|[28373067] gi|28373069|ref|NM\_174964.1|[28373069] gi|28373071|ref|NM\_174965.1|[28373071] gi|28373073|ref|NM 174966.1|[28373073] gi|28373075|ref|NM\_174967.1|[28373075] gi|28373077|ref|NM\_174968.1|[28373077] gil28373081 refINM 174969.1 [28373081] gij28373083[ref[NM\_174970.1][28373083] gi[28373085]ref[NM\_174971.1[[28373085] gil28373087[ref]NM 174972.1[[28373087] gil48255895[reflNM 174975.3][48255895] gil28372510|ref|NM 174976.1|[28372510] gij30410718|refiNM 174977.2|[30410718] gi|28372512|ref|NM\_174978.1|[28372512] gi|27923946|ref|NM\_174980.1|[27923946] gi|31343345|ref|NM\_174981.2|[31343345] gij34222225|ref|NM\_174983.2|[34222225] gi|28373118|ref|NM\_175038.1|[28373118] gil28373091|ref|NM 175039.1|[28373091] gil28373093|refINM 175040.1|[28373093] gil30179912|ref|NM 175047.2|[30179912] gi[28373098]ref[NM\_175052.1][28373098] gi|31341312|ref|NM\_175053.2|[31341312] gli28416433[ref[NM 175054.2][28416433] gi|28872748|ref|NM\_175055.2|[28872748] gi|28372568|ref|NM\_175056.1|[28372568] gi|49574494|ref|NM\_175057.2|[49574494] gl|48675826|ref|NM\_175058.3|[48675826] gij28269706|ref|NM\_175060.1|[28269706] gi|31341302|ref|NM\_175061.2|[31341302] gil40255196|ref|NM 175062.2|[40255196] gil 45580693 ref NM 175063.3 [45580693] gi|30795187|ref|NM 175064.2|[30795187] gi|29171728|ref|NM\_175065.2|[29171728] gi|37059776|ref|NM\_175066.2|[37059776] glj28173557[ref]NM\_175067.1[[28173557] gi|31341282|ref|NM\_175068.2|[31341282] gi|28329429|ref|NM\_175069.1|[28329429] gil28329426lreflNM 175071.1[[28329426] gi|28329432|ref|NM\_175072.1|[28329432] gil28329435|ref|NM 175073.1|[28329435] gil31341283|ref|NM\_175075.2|[31341283] gli28416423[ref]NM 175077.1[[28416423] gil45597457|ref|NM\_175078.1|[45597457] giJ28416934|ref|NM\_175080.1|[28416934] gi|28416936|ref|NM\_175081.1|[28416936] gil28416898|ref|NM 175085.1|[28416898] gil28373128|ref|NM 175566.1|[28373128] gil28416928|ref|NM 175567.1|[28416928]

gi|28416930|ref|NM\_175568.1|[28416930] gi|28212219|re:f|NM\_175569.1|[28212219] gi|28416955|ref|NM\_175571.1|[28416955] gi|28373193|ref|NM\_175573.1|[28373193] gi|40806203|re-f|NM\_175575.4|[40806203] gi|28558992|ref|NM\_175605.2|[28558992] gi|28373121|ref|NM\_175607.1|[28373121] gi|28416435|ref|NM\_175609.1|[28416435] gi|28416401|ref|NM\_175610.1|[28416401] gi|28416443|ref|NM\_175611.1|[28416443] gi|28373123|ref|NM\_175612.1|[28373123] gi|28373125|ref|NM\_175613.1|[28373125] gi|46370098|ref|NM\_175614.2|[46370098] gi|31342253|ref|NM 175616,2|[31342253] gi|31581520|ref|NM\_175617.2|[31581520] gi|28269686|ref|NM\_175619.1|[28269686] gi|31342255|ref|NM\_175622.2|[31342255] gi|41281855|ref|NM 175623.1|[41281855] g||41281870|ref|NM\_175624.1|[41281870] g||41281861|ref|NM\_175625.1|[41281861] gi|41281876|ref|NM\_175626.1|[41281876] gl|41281867|ref|NM\_175627.1|[41281867] gi|28559068|ref|NM\_175629.1|[28559068] gi|28559070|ref|NM\_175630.1|[28559070] gi|28329415|ref|NM 175634.1|[28329415] gl|28329418|ref|NM\_175635.1|[28329418] gi|28329421|ref|NM\_175636.1|[28329421] gi|28559005|ref|NM\_175698.1|[28559005] gi|46852393|ref|NM 175709,2|[46852393] gl|28559008|ref|NM\_175711.1|[28559008] gi|28558983|ref|NM\_175719.1|[28558983] aii28558985|ref|NM\_175720.1|[28558985] ali28558987[ref]NM\_175721.1[[28558987] gi|28558989|ref|NM\_175722.1|[28558989] gl|28559016|ref|NM\_175723.1|[28559016] gij28559022|ref|NM\_175724.1|[28559022] gi|28559024|ref|NM\_175725.1|[28559024] gi|28559026|ref|NM\_175726.1|[28559026] gi|28559028|ref|NM\_175727.1|[28559028] gi|28559030|ref|NM\_175728.1|[28559030] gi|28559012|ref|NM\_175729.1|[28559012] gi|31342257|ref|NM\_175733.2|[31342257] gi|31342258|ref|NM\_175734.2|[31342258] gi[31652254]ref[NM\_175735.3[[31652254] gi|40217838|ref|NM\_175736.3|[40217838] gi|31343329|ref|NM\_175737.2|[31343329] gl|31343330|ref|NM\_175738.2|[31343330] gi|31343337|ref|NM 175739,2|[31343337] gi|50233786|ref|NM\_175741.1|[50233786] gi|29029617|ref|NM 175742.1|[29029617] gi|29029619|ref|NM\_175743.1|[29029619] gi|34222243|ref|NM\_175744.3|[34222243] gi|45505176|ref|NM\_175745.3|[45505176] gi|31343439|ref|NM\_175747.2|[31343439] gil28411949|ref|NM\_175748.1|[28411949] gi|28610148|ref|NM\_175767.1|[28610148] gi|28559002|ref|NM\_175768.1|[28559002]

gi|39753955|ref|NM\_175834.2|[39753955] gi|28559073|ref|NM\_175839.1|[28559073] gl|28559075|ref|NM\_175840.1|[28559075] gi|28559077|ref|NM\_175841.1|[28559077] gi|28559079|ref|NM\_175842.1|[28559079] gi|28558997|ref|NM\_175847.1|[28558997] gi|28559060|ref|NM\_175848.1|[28559060] gi|28559062|ref|NM 175849.1|[28559062] gi|28559064|ref|NM\_175850.1|[28559064] gi|41281881|ref|NM\_175851.1|[41281881] gi|39725959|ref|NM\_175852.3|[39725959] gi|40353730|ref|NM\_175854.4|[40353730] gi|48762943|ref|NM\_175857.3|[48762943] ail31343637|ref|NM\_175858.2|[31343637] ail28559084|ref|NM\_175859.1|[28559084] gil28466998|ref|NM\_175861.1|[28466998] gi|29029571|ref|NM\_175862.2|[29029571] gi|40068461|ref|NM\_175863.2|[40068461] gl|28610155|ref|NM\_175864.1|[28610155] gi|41281873|ref|NM 175865.1|[41281873] gi|28467002|ref|NM\_175866.1|[28467002] gi|28872779|ref|NM\_175867.1|[28872779] gi|29029626|ref|NM\_175868.1|[29029626] gi|39725709|ref|NM\_175870.3|[39725709] gi|31343610|ref|NM\_175871.2|[31343610] gi|38570118|ref|NM\_175872.3|[38570118] gl|44921609|ref|NM\_175873.3|[44921609] gi|31343594|ref|NM\_175874.2|[31343594] gi|40354215|ref|NM\_175875.3|[40354215] gi|44921614|ref|NM\_175876.2|[44921614] gi|40255200|ref|NM\_175877.3|[40255200] gi|31343579|ref|NM\_175878.2|[31343579] gi|31343527|ref|NM\_175881.2|[31343527] gi|38524590|ref|NM\_175882.1|[38524590] gi|31343528|ref|NM\_175884.2|[31343528] gi|31343498|ref|NM\_175885.2||31343498| ali31343499|ref|NM\_175886.2|[31343499] gi|31343480|ref|NM 175887,2|[31343480] gi|40255202|ref|NM\_175892.3|[40255202] gl|31343331|ref|NM 175895.2|[31343331] gi|31343323|ref|NM\_175898.2|[31343323] gi|31342260|ref|NM\_175900.2|[31342260] gi|31342241|ref|NM\_175901.2|[31342241] gl|34222251|ref|NM\_175902.3|[34222251] gi|31342242|ref|NM\_175903.2|[31342242] gi|31342232|ref|NM\_175904.2|[31342232] gi|31342225|ref|NM\_175906.2|[31342225] gi|51036599|ref|NM\_175907.3|[51036599] gi|40255204|ref|NM\_175908.3|[40255204] gi|40255231|ref|NM 175910,4|[40255231] gi|31342210|ref|NM 175911,2|[31342210] gl|29893811|ref|NM\_175913.2|[29893811] gi|31341870|ref|NM\_175918.2|[31341870] gi|31341799|ref|NM\_175920.2|[31341799] gi|51036606|ref|NM\_175921.3|[51036606] gi|31341688|ref|NM\_175922.2|[31341688] gi|31341689|ref|NM 175923,2|[31341689]

gi|31341675|ref|NM\_175924.2|[31341675] 9i|28872755|ref|NM\_175929.1|[28872755] 9i|28872804|ref|NM\_175931.1|[28872804] 9||28872729|ref|NM\_175932.1|[28872729] gi|28872750|ref|NM\_175940.1|[28872750] 9||28872742|ref|NM\_176071.1|[28872742] 9i|28872744|ref|NM\_176072.1|[28872744] 9i|28872767|ref|NM\_176081.1|[28872767] 9i|28872769|ref|NM\_176083.1|[28872769] 9i|28872771|ref|NM\_176084.1|[28872771] 9i|28872773|ref|NM\_176085.1|[28872773] gi|28872775|ref|NM\_176086.1|[28872775] 9i|28872789|ref|NM\_176095.1|[28872789] 9il28872791[ref[NM\_176096.1][28872791] 9il28603817|ref|NM\_176782.1|[28603817] gi|30581140|ref|NM\_176783.1|[30581140] gi|29171683|ref|NM\_176786.1|[29171683] gi|34328904|ref|NM\_176787.2|[34328904] gi|28872762|ref|NM\_176789.1|[28872762] gi|31343584|ref|NM\_176799.2|[31343584] gi|28872731|ref|NM\_176792.1|[28872731] 9||28872735||ref||NM\_ 176793.4||28872735| 9||28872737||ref||NM\_ 176794.4||28872737| 9||47117696||ref||NM\_ 176795.2||47117696| 9||29029607||ref||NM\_ 176796.4||29029607| gl|29029609|ref|NM 176797.1|[29029609] gl|29029611|ref|NM 176798,1[[29029611] gi|29171686|ref|NM\_176799.1|[29171686] gi|28872758|ref|NM 176800.1|[28872758] gl|29826324|ref|NM\_176801.1|[29826324] ai|28872739|ref|NM\_176805.1|[28872739] gi|35493763|ref|NM\_176806.2|[35493763] gi|28827788|ref|NM\_176810.1|[28827788] gl|33667039|ref|NM\_176811.2|[33667039] gi|40549398|ref|NM 176812,3|[40549398] gi|38455428|ref|NM\_176813.3|[38455428] gi|39753952|ref|NM\_176814.3|[39753952] gi|31341213|ref|NM\_176815.2|[31341213] gi|31341214|ref|NM\_176816.2|[31341214] gi|28827796|ref|NM\_176817.1|[28827796] gi|50978623|ref|NM\_176818.1|[50978623] gi|33519449|ref|NM\_176820.2|[33519449] gi|33519448|ref|NM\_176821.2|[33519448] gi|31543282|ref|NM\_176822.2|[31543282] gi|31341192|ref|NM\_176823.2|[31341192] 9i|29029556|ref|NM\_176824.1|[29029556] gi|45935388|ref|NM\_176825.2|[45935388] gi|29171691|ref|NM\_176826.1|[29171691] 9i|29029563|ref|NM\_176853.1||29029563| 9i|30410795|ref|NM\_176863.1||30410795| 9i|29171697|ref|NM\_176866.1||29171697| 9i|31881619|ref|NM\_176867.2|[31881619] 9i|29171701|ref|NM\_176869.1|[29171701] 9i|28866965|ref|NM\_176870.1|[28866965] 9il40288187|ref|NM\_176871.2|[40288187] 9i|29029533|ref|NM\_176874.1|[29029533] 9||33356159|ref|NM\_176875.2||33356159|

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gi|30350209|ref|NM\_178343.1|[30350209] gil30350215|refINM 178344,1|[30350215] gil30387653lrefINM 178348.1[[30387653] gil30387655lreflNM 178349.1[[30387655] gi|30387651|ref|NM 178351.1|[30387651] gi|30387647|ref|NM 178352.1|[30387647] gi|30387649|ref|NM 178353.1|[30387649] gi|30387645|ref|NM 178354.1|[30387645] gi|30387641|ref|NM 178356.1|[30387641] gi|42476188|ref|NM 178422.3|[42476188] gi|30795201|ref|NM\_178423.1|[30795201] gi|30581116|ref|NM\_178424.1|[30581116] gi|30795203|ref|NM\_178425.1|[30795203] gil30795239|ref|NM 178426,1|[30795239] gil30795241lrefINM 178427.1[[30795241] gil30410044/refINM 178428.1/[3041 0044] gil30410046|refINM 178429.1|[3041 0046] gi|30410042|ref|NM\_178430.1|[3041 0042] gli30410038|ref|NM 178431.1|[3041 0038] gi|30795254|ref|NM\_178432.1|[30795254] gij30410040|ref|NM\_178433.1|[3041 0040] gi|30410036|ref|NM\_178434.1|[3041 0036] gi|30410032|ref|NM\_178435.1|[3041 0032] gil30410034|refINM 178438,1|[3041 0034] gil34222268|refINM 178439,3|[34222268] g||30795181|ref|NM\_178441.1|[30795181] gi|41281904|ref|NM\_178443.1|[4128 1904] gi|30795216|ref|NM\_178445.1|[30795216] gil31341967 refINM 178448.2 [3134 1967] glj31341960|ref|NM 178449.2|[31341960] gi[31341961|ref|NM 178450.2|[31341961] gli31341954|refINM 178451,2|[3134 1954] gil40255219|ref|NM 178452.3|[40255219] gil31341948ireflNM 178453.2l[31341948] gl|30425377|ref|NM\_178454.1|[30425377] gil45333915|reflNM 178456,2|[45333915] gil30425381 refINM 178460.1 [30425381] gil30425385|ref|NM 178463,1|[30425385] gli30425387|ref|NM 178465.1|[30425387] gi|30425389|ref|NM\_178466.1|[30425389] gi|30425391|ref|NM 178467.1|[30425391] gi|30425393|ref|NM\_178468.1|[30425393] gi|31341942|ref|NM\_178470.2|[31341942] gi|30425399|ref|NM\_178471.1|[30425399] gi|30425401|ref|NM\_178472.1|[30425401] gil30425403|refINM 178477.1|[30425403] gil50263054|ref|NM 178483,2|[50263054] gil30425409lreflNM 178491.11[30425409] gi|40255213|ref|NM\_178493.3|[40255213] gil31341935|ref|NM 178494.2|[31341935] gi[34222262]ref[NM 178495.3][34222262] gi|31341922|ref|NM 178496.2|[31341922] gij31341915|ref|NM\_178497.2|[31341915] gij31341916|ref|NM\_178498.2|[31341916] gij31341910ireflNM 178499.2i[31341910] gil31341911|ref|NM 178500.2|[31341911] gi|31341899|ref|NM 178502.2|[31341899]

gi|40255222|ref|NM\_178504.3|[40255222] gi|50233825|ref|NM\_178505.3|[50233825] gil31341888lreflNM 178507,2|[31341888] gil31341881|ref|NM 178508,2|[31341881] gi|34222266|ref|NM\_178509.3|[34222266] gil30425443|refINM 178510,1|[30425443] gi|31341849|ref|NM\_178514.2|[31341849] gil31341844|ref|NM 178516,2|[31341844] gil31341845|ref|NM 178517.2|[31341845] gij31341836|ref|NM 178518.2|[31341836] gi|31341837|ref|NM 178519.2|[31341837] gi|31341830|ref|NM 178520,2|[31341830] gi|49574542|ref|NM\_178523.3|[49574542] gi|31341825|ref|NM\_178525.2|[31341825] gi|31341818|ref|NM\_178527.2|[31341818] gi|31341815|ref|NM\_178530.2|[31341815] gi|31341781|ref|NM\_178532.2|[31341781] gil31341771|refINM 178536,2|[31341771] gil40789264|ref|NM 178537.3|[40789264] gli31341765[ref]NM 178538.2[[31341765] gi|31341766|ref|NM 178539.2|[31341766] gi|31341752|ref|NM\_178540.2|[31341752] gi|31341753|ref|NM\_178542.2|[31341753] gl|45545420|ref|NM\_178543.3|[45545420] gi|31341741|ref|NM\_178544.2|[31341741] gil31341734|ref|NM 178545,2|[31341734] gil31341735[ref]NM 178546\_2[[31341735] gil31341729|ref|NM 178547,2|[31341729] gil31341730/refINM 178548.2/[31341730] gil31341723|ref|NM 178549,2|[31341723] gil31341724|ref|NM 178550.2|[31341724] gl|31341712|ref|NM 178552.2|[31341712] gi|31341713|ref|NM 178553.2|[31341713] gi|45505170|ref|NM\_178554.3|[45505170] gi|33356133|ref|NM\_178555.2|[33356133] gi[31560863]ref[NM\_178556.3][31560863] gi|31341708|ref|NM\_178557.2|[31341708] gi|31341703|ref|NM\_178558.2|[31341703] gi|36413606|ref|NM\_178559.3|[36413606] gi|31341698|ref|NM 178562.2|[31341698] gi|42558242|ref|NM 178563.1|[42558242] gi|31341683|ref|NM 178564.2|[31341683] gi|40255217|ref|NM\_178565.3|[40255217] gl|31341670|ref|NM\_178566.2|[31341670] gi|30425552|ref|NM\_178568.1|[30425552] gi|31340723|ref|NM\_178569.2|[31340723] gi|30425562|ref|NM\_178570.1|[30425562] ali31340718irefiNM 178571.2lf313407181 gil30581142[ref]NM 178578.1[[30581142] gil30581144[ref]NM 178579.1[[30581144] gil30581108|ref|NM 178580.1|[30581108] gi|30581110|ref|NM 178581.1|[30581110] gi|30581112|ref|NM 178582.1|[30581112] gi|31317267|ref|NM\_178583.1|[31317267] gij30795192|ref|NM 178584\_1|[30795192] gil31317269lreflNM 178585\_1[31317269] gil31083235|ref|NM 178586,1|[31083235]

gi|31083242|ref|NM\_178587.1|[31083242] gi|31083249|ref|NM 178588.1|[31083249] gi[31343604|ref|NM\_178812.2|[31343604] gil45433550|refINM 178813,4|[45433550] gil31341423|refINM 178814.2|[31341423] gil31341468lrefINM 178815.2|[31341468] gi|31341470|ref|NM\_178816.2|[31341470] gi|45827702|ref|NM\_178817.3|[45827702] gi|31343534|ref|NM\_178818.2|[31343534] gij31343375|ref|NM 178819.2|[31343375] gi[34222267]ref[NM 178820.3][34222267] gi|32189424|ref|NM\_178821.1|[32189424] gi|38490687|ref|NM 178822.3|[38490687] gi[31343459]ref[NM\_178823.2][31343459] gi|34222272|ref|NM\_178824.3|[34222272] gi|31341259|ref|NM\_178826.2|[31341259] gi|32526893|ref|NM\_178827.3|[32526893] gi|40255226|ref|NM 178828.3|[40255226] gi|31341424|ref|NM 178829.2|[31341424] gli31341376ireflNM 178830.2i[31341376] gi|31340688|ref|NM 178831.2|[31340688] gi|31341691|ref|NM\_178832.2|[31341691] gi|47271478|ref|NM\_178833.3|[47271478] gl|31343533|ref|NM\_178834.2|[31343533] gi|31343491|ref|NM\_178835.2|[31343491] gi|31343395|ref|NM 178836,2|[31343395] gil31340687lrefINM 178837.2l[31340687] gli50080216lreflNM 178838.3lf500802161 gi|40255221|ref|NM 178839.3|[40255221] gi|31341936|ref|NM\_178840.2|[31341936] gi|31343485|ref|NM\_178841.2|[31343485] gl|31341477|ref|NM\_178842.2|[31341477] gi|30524927|ref|NM\_178844.1|[30524927] gi|31077206|ref|NM\_178849.1|[31077206] gi|31077208|ref|NM\_178850.1|[31077208] gi|40255277|ref|NM\_178857.4|[40255277] gi|34222270|ref|NM\_178858.3|[34222270] gi|31341260|ref|NM 178859.2|[31341260] gi|31341319|ref|NM 178860,2|[31341319] gi|37059780|ref|NM 178861.3|[37059780] gi|30578409|ref|NM 178862.1|[30578409] gi|31341469|ref|NM\_178863.2|[31341469] gi|31341471|ref|NM\_178864.2|[31341471] gi|31340713|ref|NM\_178865.2|[31340713] gi|42542387|ref|NM\_178867.3|[42542387] gi|32130535|ref|NM\_178868.3|[32130535] gi[31077197|ref|NM\_180699.1|[31077197] gi|31077199|ref|NM 180703.1|[31077199] gi|31083279|ref|NM\_180976.1|[31083279] gi|31083287|ref|NM 180977.1|[31083287] gi|31083044|ref|NM 180981.1|[31083044] gij31083059|ref|NM 180982.1|[31083059] gi|31657146|ref|NM 180989.3|[31657146] gi|31340935|ref|NM\_180990.2|[31340935] gil38679889|ref|NM 180991.4|[38679889] gil41281926|ref|NM 181041.1|[41281926] gil41281916|ref|NM 181042.1|[41281916]

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gil31083143|ref|NM 181050.1|[31083143] gil31077210lrefINM 181054.1[[31077210] gil31083090|refINM 181076.1|[31083090] gil31083098lrefINM 181077.1ll310830981 gi|31083173|ref|NM 181078.1|[31083173] gi|31083179|ref|NM 181079.1|[31083179] gi|41281932|ref|NM 181093.1|[41281932] gi|31317281|ref|NM 181265.1|[31317281] gi|31563389|ref|NM 181268.1|[31563389] gi|31563391|ref|NM 181269.1|[31563391] gi|31563393|ref|NM\_181270.1|[31563393] gi|31563395|ref|NM\_181271.1|[31563395] gi|31563397|ref|NM\_181272.1|[31563397] gi|31563401|ref|NM 181283.1|[31563401] gi|31563403|ref|NM 181285,1|[31563403] ali31563405lreflNM 181286.1[31563405] gi|31563407|ref|NM 181287.1|[31563407] ali31563409irefiNM 181288.1[[31563409] gi|31563411|ref|NM 181289.1|[31563411] gi|31563413|ref|NM\_181290.1|[31563413] gi|31317273|ref|NM\_181291.1|[31317273] gi|31563415|ref|NM\_181292.1|[31563415] gi|31563417|ref|NM 181293.1|[31563417] gil31563419irefINM 181294.1[[31563419] ail31563421lrefINM 181295.1[31563421] gi|31563423|ref|NM\_181296.1|[31563423] gi|31563425|ref|NM\_181297.1|[31563425] gi|31563427|ref|NM 181298.1|[31563427] gi|31563429|ref|NM 181299.1|[31563429] gi|31563431|ref|NM 181300.1|[31563431] gl|31563433|ref|NM\_181301.1|[31563433] gli31317275|ref|NM\_181302.1|[31317275] ali31083065lrefINM 181304.1[31083065] ali31083071 refINM 181305.1 [31083071] gi|31083076|ref|NM\_181306.1|[31083076] gi|31083084|ref|NM 181307.1|[31083084] gil31317277|refINM 181308.1|[31317277] gi|31317240|ref|NM 181309.1|[31317240] qi|31317242|ref|NM 181310.1|[31317242] gi|31317258|ref|NM\_181311.1|[31317258] gi|31317260|ref|NM 181312.1|[31317260] gi|31317262|ref|NM\_181313.1|[31317262] gi|31317264|ref|NM\_181314.1|[31317264] gl|31317255|ref|NM\_181332.1|[31317255] gi|31317217|ref|NM\_181333.1|[31317217] gil31317219|refINM 181334.1|[31317219] gi|31317221|ref|NM 181335.1|[31317221] gil31341428|ref|NM 181336.2|[31341428] gi|31560860|ref|NM 181337.2|[31560860] gi|31317245|ref|NM 181339.1|[31317245] gi|31317283|ref|NM 181340.1|[31317283] gi|31317285|ref|NM 181341.1|[31317285] gi|31317230|ref|NM\_181342.1|[31317230] gil31317289lrefINM 181349.1l[31317289] gil41281936lreflNM 181351.1[[41281936] gil31317296|ref|NM 181353.1|[31317296] gil34222269|ref|NM 181354.2|[34222269]

gi|31317233|ref|NM\_181355.1|[31317233] gi|41281950|ref|NM\_181356.1|[41281950] gl|31657100|ref|NM\_181357.1|[31657100] gi|38201643|ref|NM\_181358.1|[38201643] gi|31317248|ref|NM\_181359.1|[31317248] gil31317294|ref|NM\_181361.1|[31317294] gi|31742515|ref|NM\_181425.1|[31742515] gi|32483403|ref|NM\_181427.1|[32483403] gi[31088849]ref[NM\_181428.1][31088849] gi|31088851|ref|NM\_181429.1||31088851| gi|31563333|ref|NM\_181430.1|[31563333] gi|31563335|ref|NM\_181431.1|[31563335] gi|31341794|ref|NM\_181435.2|[31341794] gi|31563351|ref|NM\_181441.1|[31563351] gi|31563502|ref|NM\_181442.1|[31563502] gi|31317208|ref|NM\_181443.1|[31317208] gi|31657135|ref|NM\_181446.1|[31657135] gi|31324529|ref|NM\_181449.1|[31324529] g||34335126|ref|NM\_181453.2|[34335126] gil31563353|refINM\_181454.1|[31563353] gi|31563355|ref|NM\_181455.1||31563355| gil31563357|ref|NM\_181456.1|[31563357 gi|31563339|ref|NM\_181457.1|[31563339] gi|31563341|ref|NM\_181458.1|[31563341] gli31563343|ref|NM\_181459.1|[31563343] gl|31563345|ref|NM\_181460.1|[31563345] gi|31563347|ref|NM\_181461.1|[31563347] gi|31563359|ref|NM\_181462.1|[31563359] gi|31563361|ref|NM\_181463.1|[31563361] gi|31563363|ref|NM\_181464.1|[31563363] gij31563365[ref]NM\_181465.1[31563365] gi|31563373|ref|NM\_181466.1|[31563373] gi[31563375|ref|NM\_181467.1|[31563375] gl|31563377|ref|NM\_181468.1|[31563377] gl|31563379|ref|NM\_181469.1|[31563379] gi|31563533|ref|NM\_181471.1|[31563533] gl[31657098]ref[NM\_181472.1][31657098] gi|51093725|ref|NM\_181481.2|[51093725] gi|51093715|ref|NM\_181482.2|[51093715] gi|51093722|ref|NM\_181483.2|[51093722] gi|31563369|ref|NM\_181484.1|[31563369] gl|31563371|ref|NM\_181485.1|[31563371] gi|31652231|ref|NM\_181486.1|[31652231] gi|32129210|ref|NM\_181489.3|[32129210] ai|31652217|ref|NM\_181491.1|[31652217] al|31652241|ref|NM\_181492,1|[31652241] gl|31657143|ref|NM\_181493.1|[31657143] gi|31652237|ref|NM\_181500.1|[31652237] gil31657141|ref|NM\_181501.1|[31657141] gi[31563527]ref[NM\_181502.1][31563527] gi|31415881|ref|NM\_181503.1|[31415881] gi|32455251|ref|NM\_181504.2|[32455251] gi|31415879|ref|NM\_181505.1|[31415879] gi|42476317|ref|NM\_181506.3|[42476317] gi|31657122|ref|NM\_181507.1|[31657122] gil31657124|ref|NM\_181508.1|[31657124] gij31563517|ref|NM\_181509.1|[31563517]

gi|31657104|ref|NM 181510.1|[31657104] gi|31652221|ref|NM\_181512.1|[31652221] gi|31652223|ref|NM\_181513.1|[31652223] gi|31652225|ref|NM\_181514.1|[31652225] gi|31652227|ref|NM\_181515.1|[31652227] gi|40549457|ref|NM\_181519.2|[40549457] gi|31657095|ref|NM\_181521.1|[31657095] ail32307102|ref|NM\_181522.1|[32307102] gi|32455247|ref|NM 181523,1|[32455247] gi|32455249|ref|NM 181524,1|[32455249] gi|32307104|ref|NM 181525.1|[32307104] gi[31563523|ref|NM 181526.1|[31563523] gi|31563511|ref|NM\_181527.1|[31563511] gi|31563513|ref|NM\_181528.1|[31563513] gi|32307106|ref|NM 181530.1|[32307106] gil31881692|ref|NM 181531.1|[31881692] gil31581555|ref|NM 181532,2|[31581555] gi|32451491|ref|NM 181533,3|[32451491] gi|31581553|ref|NM 181534,2|[31581553] g||31581551|ref|NM\_181535.2|[31581551] gi|31559824|ref|NM\_181536.1|[31559824] gij31581550|ref|NM\_181537.2|[31581550] g||31559820|ref|NM\_181538.1|[31559820] gl|31581548|ref|NM\_181539.2|[31581548] gi|31652239|ref|NM\_181552.1|[31652239] gi|32130525|ref|NM\_181553.1|[32130525] gil32130527 refINM 181554.1 [32130527] gi|32130529|ref|NM\_181555.1|[32130529] gi|31795537|ref|NM\_181558.1|[31795537] gi|34335185|ref|NM 181571.1|[34335185] gi|31795590|ref|NM 181572,2|[31795590] gi|31881686|ref|NM 181573,1|[31881686] gii32313574|ref|NM\_181575.2|[32313574] gi|31712023|ref|NM\_181576.1|[31712023] gi|31795539|ref|NM\_181578.1|[31795539] gi|31742495|ref|NM\_181581.1|[31742495] gi|31742507|ref|NM\_181597.1|[31742507] gi|31742512|ref|NM 181598.1|[31742512] gi|31791007|ref|NM 181599.1|[31791007] gi|31791003|ref|NM\_181600.1|[31791003] gi|31791037|ref|NM\_181602.1|[31791037] ai|31791039|ref|NM\_181604.1|[31791039] gi|31791033|ref|NM 181605.1|[31791033] gi|31791029|ref|NM\_181607.1|[31791029] gi|31791031|ref|NM\_181608.1|[31791031] gi|31791025|ref|NM\_181609.1|[31791025] gi|31791027|ref|NM\_181610.1|[31791027] gi|31791021|ref|NM\_181611.1|[31791021] gi|31791023|ref|NM\_181612.1|[31791023] gi|31791017|ref|NM 181614.1|[31791017] gi|31791019|ref|NM\_181615.1|[31791019] gi|31791013|ref|NM 181616.1|[31791013] gi|31791015|ref|NM 181617.1|[31791015] gi|32130532|ref|NM\_181618.1|[32130532] gi|31791009|ref|NM\_181619.1|[31791009] gi|31791011|ref|NM\_181620.1|[31791011] gi|38569478|ref|NM\_181621.2|[38569478]

gil31791001|reflNM 181622.1|[31791001] gil31790997|ref|NM 181623.1|[31790997] gil31790999|ref|NM 181624.1|[31790999] ail32307153 refINM 181640.1 [32307153] ai|32307155|ref|NM 181641.1|[32307155] gi|32313598|ref|NM 181642.1|[32313598] gi|31791054|ref|NM 181643.1|[31791054] gi|37059798|ref|NM\_181644.2|[37059798] gi|31791050|ref|NM\_181645.1|[31791050] gi[37202115]ref[NM\_181646.2][37202115] gi|31791046|ref|NM\_181647.1|[31791046] gi[32455259|ref[NM\_181651.1][32455259] gil32455261 refINM 181652.1 [32455261] gij31795560|ref|NM\_181654.1|[31795560] gil31795554|ref|NM 181655,1|[31795554] gil31795556|ref|NM 181656.1|[31795556] gi[31881791|ref[NM 181657.1|[31881791] gi[32307125|ref|NM 181659.1|[32307125] gi[34556190]ref[NM\_181661.1][34556190] gi[50511946]ref[NM\_181670.2][50511946] gi[32307141]ref[NM 181671.1][32307141] gil32307147 refiNM 181672.1 [32307147] gi[32307149]ref[NM\_181673.1][32307149] gi|32307112|ref|NM 181674.1|[32307112] gil32307114|ref|NM 181675.1|[32307114] gi|32307116|ref|NM\_181676.1|[32307116] gi|32307118|ref|NM 181677.1|[32307118] gi|32307120|ref|NM\_181678.1|[32307120] gi|32307129|ref|NM\_181679.1|[32307129] gil48717493lrefINM 181684.2[[48717493] gil32140179|ref|NM 181686,1|[32140179] gil32140181lrefINM 181688.1l[32140181] gil32307135|ref|NM 181689.1|[32307135] gil32307162[refINM 181690.1][32307162] gil32455263lreflNM 181696.1[[32455263] gi[32455265|ref|NM\_181697.1|[32455265] gi|32171183|ref|NM\_181698.1|[32171183] gl|32455243|ref|NM 181699.1|[32455243] gl[32171251]ref[NM\_181701.1][32171251] gi|32483370|ref|NM\_181702.1|[32483370] gi|32483411|ref|NM\_181703.1|[32483411] gi|32699146|ref|NM\_181704.1|[32699146] ali32171235irefiNM 181705.1[32171235] gi|42476213|ref|NM 181706.3|[42476213] gil32698787lrefINM 181707.11[32698787] gi|32171232|ref|NM 181708.1|[32171232] gi|40255256|ref|NM 181709.2|[40255256] gi|34222361|ref|NM 181710.2|[34222361] gi|32171220|ref|NM 181711.1|[32171220] gi|44917612|ref|NM\_181712.2|[44917612] gi|36030972|ref|NM\_181713.3|[36030972] gi|32171218|ref|NM\_181714.1|[32171218] gi|32171214|ref|NM\_181715.1|[32171214] gij32171195|ref|NM\_181716.1|[32171195] gi[32171210]ref[NM 181717.1][32171210] gil38708312|ref|NM 181718.3|[38708312] gi|42476209|ref|NM 181719.2|[42476209]

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gil32171208lrefINM 181720.1II321712081 gil42734392lreflNM 181721.1I[42734392] gil32171202lrefINM 181722.1I[32171202] gi|32171204|ref|NM 181723.1|[32171204] gi|32171198|ref|NM 181724.1|[32171198] gi|32401415|ref|NM 181725.1|[32401415] gi[32171200|ref|NM\_181726.1|[32171200] gi[32171193]ref[NM 181727.1][32171193] gi|32481217|ref|NM\_181733.1|[32481217] gi[33188451|ref|NM\_181737.1][33188451] gil33188453|ref|NM 181738.1|[33188453] gil32454730|ref|NM 181739,1|[32454730] gil32454732|ref|NM 181740.1|[32454732] gi|32454745|ref|NM\_181741.1|[32454745] gi|32454747|ref|NM 181742.1|[32454747] gi|38678523|ref|NM 181744.1|[38678523] gi[32698783]ref[NM 181745,1][32698783] gi|32455255|ref|NM\_181746.1|[32455255] gi[32454753|ref|NM\_181747.1][32454753] gi|32455238|ref|NM\_181755.1|[32455238] gii32308168 refiNM 181756.1[32308168] gil32967275|ref|NM 181762.1|[32967275] gll33356156|ref|NM 181773,2|[33356156] gil42476321|ref|NM 181774,2|[42476321] gli34222359|refINM 181775,2|[34222359] gi|32401452|ref|NM 181776.1|[32401452] gi|32967277|ref|NM 181777.1|[32967277] gi|32401472|ref|NM\_181780.1|[32401472] gi|33946292|ref|NM 181781.2|[33946292] gi|42476174|ref|NM\_181782.2|[42476174] gi|32401450|ref|NM\_181783.1|[32401450] gi[32401444]ref[NM\_181784.1][32401444] gi[32401446]ref[NM\_181785.1][32401446] gi|34330189|ref|NM\_181786.2|[34330189] gi|32401442|ref|NM 181787.1|[32401442] gi|32401436|ref|NM 181788.1|[32401436] gl|32401438|ref|NM 181789.1|[32401438] gi|32401432|ref|NM\_181790.1|[32401432] gi|32401434|ref|NM\_181791.1|[32401434] gi|32483389|ref|NM\_181794.1|[32483389] gi|32483391|ref|NM\_181795.1|[32483391] gi|32479522|ref|NM\_181797.1|[32479522] gi|32479524|ref|NM\_181798.1|[32479524] gi|32967282|ref|NM 181799.1||32967282| gi|32967284|refINM 181800.1|[32967284] gi|32967286|refINM 181801.1|[32967286] gi|32967288|ref|NM 181802.1|[32967288] gi|32967290|ref|NM 181803.1|[32967290] gi|32483380|ref|NM 181804.1|[32483380] gi|32483382|ref|NM\_181805.1|[32483382] gi|45580729|ref|NM\_181806.2|[45580729] gii32441270|ref|NM 181807.1|[32441270] gi|32698791|ref|NM\_181808.1|[32698791] gi|32441272|ref|NM\_181809.1|[32441272] gil32528309|ref|NM 181814.1|[32528309] gi|32967253|ref|NM 181825.1|[32967253] gi|32967255|ref|NM\_181826.1|[32967255]

gi|32967257|ref|NM\_181827.1|[32967257] gi[32967259]ref[NM\_181828.1][32967259] gi[32967261|ref[NM\_181829.1][32967261] gi|32967263|ref|NM\_181830.1|[32967263] gi|32967513|ref|NM\_181831.1|[32967513] gl|32967265|ref|NM\_181832.1|[32967265] gi|32967267|ref|NM 181833.1|[32967267] gi[32967269[ref]NM\_181834.1][32967269 ail32967271|ref|NM\_181835.1|[32967271] all40255262|ref|NM\_181836.3|[40255262] gi|32483368|ref|NM\_181837.1|[32483368] gi|33188455|ref|NM\_181838.1|[33188455] gi|32483385|ref|NM\_181839.1|[32483385] gi|32469494|ref|NM\_181840.1|[32469494] gi[32469500]ref[NM 181841.1][32469500] gi|32469508|ref|NM\_181842,1|[32469508] gi[32469514|ref[NM\_181843.1][32469514] gi|38327514|ref|NM\_181844.2|[38327514] gi|32813444|ref|NM\_181846.1|[32813444] gi|40556374|ref|NM\_181847.2|[40556374] gl|32483358|ref|NM\_181861.1|[32483358] gi|32528277|ref|NM\_181862.1|[32528277] ai|32528279|ref|NM\_181863.1|[32528279] gi|32528281|ref|NM\_181864.1|[32528281] gi|32528283|ref|NM\_181865.1|[32528283] gi|32528285|ref|NM\_181866.1|[32528285] gi 32483360 ref NM 181868, 11[32483360] gi|32483362|ref|NM\_181869.1|[32483362] gi|32479518|ref|NM\_181870.1|[32479518] gi|32967596|ref|NM\_181871.1|[32967596] gl|32490573|ref|NM\_181872.1|[32490573] gi|32490578|ref|NM\_181873.1|[32490578] gi|32528267|ref|NM\_181874.1|[32528267] gi|32528269|ref|NM\_181875.1|[32528269] ail32967592|ref|NM\_181876.1|[32967592] gi|37675274|ref|NM\_181877.2|[37675274] gi|32895360|ref|NM\_181879.1|[32895360] gi|49355827|ref|NM\_181880.1|[49355827] gi|32490588|ref|NM\_181882.1|[32490588] gi|32490566|ref|NM\_181885.1|[32490566] gl|33149309|ref|NM\_181886.1|[33149309] gi|33149311|ref|NM 181887.1|[33149311] gi|33149313|ref|NM\_181888.1|[33149313] gi|33149315|ref|NM\_181889.1|[33149315] gli33149317[ref]NM\_181890.1[[33149317] gi|33149319|ref|NM\_181891.1|[33149319] gi|33149321|ref|NM\_181892.1|[33149321] gi|33149323|ref|NM\_181893.1|[33149323] gi|32528272|ref|NM\_181894.1|[32528272] gi|32967585|ref|NM\_181897.1|[32967585] gi|38569455|ref|NM\_181900.2|[38569455] gi|32895362|ref|NM\_181985.1|[32895362] gi|32895364|ref|NM\_181986.1|[32895364] gi|32528290|ref|NM 182314.1|[32528290] gi|32528296|ref|NM 182398,1|[32528296] gi|33286419|ref|NM\_182470.1|[33286419] gi|33286421|ref|NM\_182471.1|[33286421]

gi|32967318|ref|NM 182472.1|[32967318] gi|32967304|ref|NM 182476.1|[32967304] gi|33286437|ref|NM 182477.1|[33286437] gi|32967306|ref|NM\_182480.1|[32967306] gil32699148lreflNM 182481.1II326991481 gil32699150lreflNM 182482.1lf326991501 gi|33286433|ref|NM\_182483.1|[33286433] gi|32699144|ref|NM\_182484.1|[32699144] gi|33188438|ref|NM\_182485.1|[33188438] gi|32967299|ref|NM\_182486.1|[32967299] gi|32698794|ref|NM\_182487.1|[32698794] gi|32698814|ref|NM 182488.1|[32698814] gi|32698789|ref|NM 182489,1|[32698789] gi|32698785|ref|NM\_182490.1|[32698785] gi|32698821|ref|NM 182491.1|[32698821] gi|32698823|ref|NM\_182492.1|[32698823] gi[32698825]ref[NM\_182493.1][32698825] gi[32698827]ref[NM\_182494.1][32698827] gi[41349679|ref[NM\_182495.3][41349679] gl|32698829|ref|NM 182496.1|[32698829] gil32698831[ref|NM 182497.1][32698831] gi|38788218|ref|NM 182498.2|[38788218] gi|32698834|ref|NM 182499.1|[32698834] gl|32698836|ref|NM\_182500.1|[32698836] gi|42740902|ref|NM\_182501.2|[42740902] gl|32698840|ref|NM\_182502.1|[32698840] gil32698844lreflNM 182503.1[[32698844] gli34222370irefiNM 182504.2lf342223701 gli38327628lreflNM 182505.3lf383276281 gi|32698850|ref|NM 182506.1|[32698850] gi|32698852|ref|NM 182507.1|[32698852] gl|32698854|ref|NM 182508.1|[32698854] gi|40805853|ref|NM 182509.2|[40805853] gi|32698858|ref|NM\_182510.1|[32698858] gi|40255263|ref|NM\_182511.2|[40255263] gl|32698865|ref|NM\_182513.1|[32698865] gi|32698869|ref|NM\_182516.1|[32698869] gi|32698863|ref|NM\_182517.1|[32698863] gi|32698873|ref|NM\_182518.1|[32698873] gl|32698867|ref|NM\_182519.1|[32698867] gi|32698877|refINM 182520.1|[32698877] gi|32698871|ref|NM 182521.1|[32698871] gi|40255264|ref|NM 182522.2|[40255264] gl|32698875|ref|NM 182523.1|[32698875] gi|32698885|ref|NM\_182524.1|[32698885] gi|32698879|ref|NM\_182525.1|[32698879] aii32698889[ref[NM\_182526.1][32698889] gi|32698883|ref|NM\_182527.1|[32698883] gi|32698893|ref|NM 182528,1|[32698893] gi|32698887|ref|NM 182529.1|[32698887] gi|32698897|ref|NM 182530.1|[32698897] gi|32698891|ref|NM 182531.1|[32698891] gi|32698901|ref|NM 182532.1|[32698901] gi|32698895|ref|NM 182533.1|[32698895] gi|32698905|ref|NM 182534.1|[32698905] gi|32698899|ref|NM 182535.1|[32698899] gi|32698947|ref|NM 182536,1|[32698947]

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gi|47519876|ref|NM 182537.2|[47519876] gi|47271488|ref|NM 182538.3|[47271488] gi|32698909|ref|NM 182539.1|[32698909] gi|32698913|ref|NM\_182541.1|[32698913] gil32698917lreflNM 182543.1lf326989171 gil32698925lreflNM 182546.11[32698925] gi|33457307|ref|NM\_182547.2|[33457307] gi|34222377|ref|NM\_182548.2|[34222377] gi|33438593|ref|NM\_182549.1|[33438593] gl|50659060|ref|NM\_182551.3|[50659060] gi|33519460|ref|NM\_182552.2|[33519460] gi|32698937|ref|NM\_182553.1|[32698937] gi|32698931|ref|NM\_182554.1|[32698931] gi|32698941|ref|NM\_182556.1|[32698941] gi|32698935|ref|NM\_182557.1|[32698935] gi|32698945|ref|NM\_182558.1|[32698945] gi|32698939|ref|NM 182559.1|[32698939] gi|32698951|ref|NM\_182560.1|[32698951] gi|32698943|ref|NM\_182561.1|[32698943] gi|32698955|ref|NM\_182562.1|[32698955] gi|34222374|ref|NM 182563,2|[34222374] gil32698959|ref|NM 182564.1|[32698959] gli34222379|ref|NM 182565.2|[34222379] gi|32698963|ref|NM 182566.1|[32698963] gi|50979285|ref|NM 182568.2|[50979285] gi|32698961|ref|NM\_182569.1|[32698961] gi|32698971|ref|NM\_182570.1|[32698971] gi|40255265|ref|NM\_182572.2|[40255265] gi|32698975|ref|NM 182573.1|[32698975] gil32698969lreflNM 182574.1l[32698969] gil32698979lreflNM 182575.1l[32698979] gil32698983lreflNM 182577.1ll326989831 gi|32698977|ref|NM 182578.1|[32698977] gi|32698987|ref|NM\_182579.1|[32698987] gi|32698981|ref|NM 182580.1|[32698981] gi|32698991|ref|NM 182581.1|[32698991] gi|32698995|ref|NM 182583.1|[32698995] gi|32698989|ref|NM\_182584.1|[32698989] gi|32698993|ref|NM\_182585.1|[32698993] gi|32699002|ref|NM\_182586.1|[32699002] gi|32698997|ref|NM\_182587.1|[32698997] gi|47519912|ref|NM\_182589.2|[47519912] gi[32699000|ref|NM\_182590.1|[32699000] ail32699010lreflNM 182591.11[32699010] gi|32699004|ref|NM 182592.1|[32699004] gi|32699014|ref|NM 182594.1|[32699014] gi|32699008|ref|NM 182595.1|[32699008] gi|32813448|ref|NM 182596.1|[32813448] gi|32699018|ref|NM\_182597.1|[32699018] gi|32699012|ref|NM\_182598.1|[32699012] gil32699016lrefINM 182600.1l[32699016] ail32699025lrefINM 182603.1ll326990251 ail32699029lreflNM 182605.1[[32699029] gil47271482|ref|NM 182606.2|[47271482] gi|34222376|ref|NM 182607.2|[34222376] gi|40255267|ref|NM 182608.2|[40255267]

gi|33438597|ref|NM\_182609.1|[33438597]

gi|32699037|ref|NM\_182610.1|[32699037] gi|32699041|refINM 182611.1|[32699041] gi|32699044|ref|NM 182612.1|[32699044] gi|33504572|ref|NM 182613.1|[33504572] gi|34222380|ref|NM 182614.2|[34222380] gi|33859820|ref|NM 182615,1|338598201 gi|32699049|ref|NM\_182616.1|[32699049] gi|32699051|ref|NM\_182617.1|[32699051] gi|33504574|ref|NM\_182619.1|[33504574] gi|32699053|ref|NM\_182620.1|[32699053] gi|32699055|ref|NM\_182621.1|[32699055] gi[32699057|ref|NM\_182623.1|[32699057] gi|47271492|ref|NM\_182625.2|[47271492] gi|32699061|ref|NM\_182626.1|[32699061] ail32699063|ref|NM\_182627.1|[32699063] gi|32699065|ref|NM 182628.1|[32699065] gi|32699069|ref|NM\_182631.1|[32699069] gi|32699071|ref|NM\_182632.1|[32699071] gi|33438599|ref|NM\_182633,1|[33438599] gi|32699073|ref|NM 182634.1|[32699073] gi|32699075|ref|NM 182635.1|[32699075] gi|33286409|ref|NM\_182637.1|[33286409] gi|33286411|ref|NM\_182638.1|[33286411] gi|33286413|ref|NM\_182639.1|[33286413] gi|33188462|ref|NM\_182640.1|[33188462] gi|38788273|ref|NM\_182641.2|[38788273] gi|32813442|ref|NM\_182642.1|[32813442] gi|33188432|ref|NM\_182643.1|[33188432] gl|32967313|ref|NM 182644.1|[32967313] gi|33620721|ref|NM\_182645.2|[33620721] gi|33188440|ref|NM\_182646.1|[33188440] gi|33286423|ref|NM\_182647.1|[33286423] gi|32967604|ref|NM\_182648.1|[32967604] g||33239450|ref|NM\_182649.1|[33239450] gi|32964822|ref|NM\_182658.1|[32964822] gl|33188426|ref|NM\_182659.1|[33188426] gi|33188428|ref|NM\_182660.1|[33188428] gi|32967302|ref|NM 182661.1|[32967302] gi|33469969|ref|NM\_182662.1|[33469969] gl|32996730|ref|NM\_182663.1|[32996730] gi|32996732|ref|NM\_182664.1|[32996732] gi|32996734|ref|NM\_182665.1|[32996734] gi|33359690|ref|NM\_182666.1|[33359690] gi|33356540|ref|NM\_182676.1|[33356540] gi|33359693|ref|NM 182678.1|[33359693] gi|33356549|ref|NM\_182679.1|[33356549] gi|33356555|ref|NM\_182680.1|[33356555] gi|33356557|ref|NM 182681.1|[33356557] gi|33359696|ref|NM 182682.1|[33359696] gi|33149303|ref|NM\_182683.1|[33149303] gi|33149305|ref|NM 182684.1|[33149305] gi|33359679|ref|NM\_182685.1|[33359679] gi|33359218|ref|NM\_182686.1|[33359218] gi|33383238|ref|NM\_182687.1|[33383238] gi[33359700|ref|NM\_182688.1][33359700] gi|33359685|ref|NM 182689.1|[33359685] gi|33359687|ref|NM\_182690.1|[33359687]

gij33188446[ref|NM\_182691.1][33188446] qil33188448|ref|NM 182692,1|[33188448] gil33356153|refINM 182697.1|[33356153] gi|33186883|ref|NM\_182699.1|[33186883] gi|39812495|ref|NM\_182700.2|[39812495] qi|33186886|ref|NM 182701.1|[33186886] gi|33186881|ref|NM\_182702.1|[33186881] gij38176293|ref|NM 182703.2|[38176293] gi|33186894|ref|NM\_182704.1|[33186894] gij33186900|ref|NM\_182705.1|[33186900] gi|45827730|ref|NM\_182706.2|[45827730] gi[36287059]ref[NM\_182709.1][36287059] qil36287068|refINM 182710.1|[36287068] gil33239446|ref|NM 182712.1|[33239446] gi|33239442|ref|NM\_182715.1|[33239442] gi|34335187|ref|NM\_182717.1|[34335187] ail34335189|ref|NM 182718.1|[34335189] gil34335191|ref|NM 182719.1|[34335191] gij34335193 refINM 182720.1 [34335193] glj34335195|ref|NM\_182721.1|[34335195] gij34335197 ref|NM\_182722.1 [34335197] gil34335199|ref|NM\_182723.1|[34335199] gi|34335201|ref|NM\_182724.1|[34335201] gil34335203|refINM 182725,1|[34335203] gil33286429|refINM 182728.1|[33286429] gil33519425|ref|NM 182729.1|[33519425] gil33356543|ref|NM 182734.1|[33356543] gl|33519468|ref|NM\_182739.1|[33519468] gij33598939|ref|NM 182740.1|[33598939] gij33300664|ref|NM\_182741.1|[33300664] gi|33519427|ref|NM\_182742.1|[33519427] gij33519429|ref|NM\_182743.1|[33519429] gij33519446|ref|NM\_182744.1|[33519446] gij33469916|ref|NM\_182746.1|[33469916] gil33519451|ref|NM 182749.1|[33519451] gil33383236|ref|NM 182751.1|[33383236] gij38679906|ref|NM 182752.2|[38679906] gi[33300650|ref|NM 182755.1|[33300650] gi[33300652|ref[NM\_182756.1][33300652] gi|50284695|ref|NM 182757.2|[50284695] gij33300656|ref|NM\_182758.1|[33300656] gij33300648 ref|NM\_182759.1 [33300648] gij38202249|ref|NM\_182760.2|[38202249] gij33300654|ref|NM\_182761.1|[33300654] gi|47271497|ref|NM\_182762.2|[47271497] gil33519457 | refINM 182763.1 | [33519457] gi|33469946|ref|NM\_182764.1|[33469946] gil33342279|refINM 182765.1|[33342279] gij51093833|ref|NM 182766.2|[51093833] gij47716688|ref|NM\_182767.2|[47716688] gij34335209|ref|NM 182769.1|[34335209] gi[34335211]ref[NM\_182770.1][34335211] oil34335213|refINM 182771,1|[34335213] qil34335215|ref|NM 182772.1|[34335215] qi|33359210|ref|NM 182774.1|[33359210] gij33359216|ref|NM 182775.1|[33359216] gij33469921 ref[NM\_182776.1][33469921]

gi|34222375|ref|NM 182777.2|[34222375] gi|33354235|ref|NM 182779.1|[33354235] gi|34452727|ref|NM 182789.2|[34452727] gi|33386694|ref|NM 182790.1|[33386694] gi|33943100|ref|NM 182791.1|[33943100] gi|33386698|ref|NM 182792.1|[33386698] gi|33386702|ref|NM 182793.1|[33386702] gi|33386700|ref|NM\_182794.1|[33386700] gi|33391149|ref|NM\_182795.1|[33391149] gi|33519454|ref|NM\_182796.1|[33519454] gi|33469938|ref|NM\_182797.1|[33469938] gi|33469930|ref|NM\_182798.1|[33469930] gi|33469934|ref|NM\_182799.1|[33469934] gi|33383232|ref|NM\_182800.1|[33383232] gi|33469936|ref|NM 182801.1|[33469936] gi|33469923|ref|NM\_182802.1|[33469923] gi[33413401]ref[NM\_182804.1][33413401] gi|33469973|ref|NM\_182810.1|[33469973] gij33598945[ref]NM\_182811.1][33598945] qi|33469961|ref|NM\_182812.1|[33469961] gil33598921lrefINM 182826.1lf33598921 gil33469942lrefINM 182827.1lf33469942 gli33457296lrefINM 182828.1[[33457296] gil33469144|ref|NM 182829.1|[33469144] gij38158012|ref|NM 182830.2|[38158012] gi|33457298|ref|NM 182831.1|[33457298] gl|33457305|ref|NM 182832.1|[33457305] gi|33457300|ref|NM\_182833.1|[33457300] gil33469977lrefINM 182835.1l[33469977] gil33469950lrefINM 182836.1[[33469950] ali33469136lrefINM 182838.1lf334691361 gil33519443lrefINM 182847.1lf335194431 gil38570071lrefINM 182848.2lf385700711 gi|33519435|ref|NM\_182849.1|[33519435] gi|34335217|ref|NM 182850.1|[34335217] gi|33519437|ref|NM 182851.1|[33519437] gi|33519439|ref|NM\_182852.1|[33519439] gi|34335219|ref|NM\_182853.1|[34335219] gi|33504570|ref|NM\_182854.1|[33504570] gi|34365782|ref|NM\_182894.1|[34365782] gi|33598936|ref|NM\_182895.1|[33598936] gi|33598955|ref|NM\_182896.1|[33598955] gi|33589858|ref|NM\_182898.1|[33589858] gil41351543irefINM 182899.2I[41351543] gil33667100lrefINM 182901.1[[33667100] gi|34222381|ref|NM 182902.2|[34222381] gi|33620743|ref|NM 182903.2|[33620743] gi|40255269|ref|NM\_182904.2|[40255269] gi|39573706|ref|NM\_182905.1|[39573706] gi|33667102|ref|NM\_182906.1|[33667102] gil33946273lrefINM 182907.1lf339462731 gil40548401lrefINM 182908.3l[40548401] gil33667104lrefINM 182909.1l[33667104] gil33624860[ref]NM 182910.1[[33624860] gil41281983[ref]NM 182911.1[[41281983] gi|33624866|ref|NM 182912.1|[33624866] gi|33624872|ref|NM\_182913.1|[33624872]

gil33624878lrefINM 182914.1lf336248781 gil41281973|ref|NM 182915.1|[41281973] gil41281989lrefINM 182916.1[[41281989] gil38201620lreflNM 182917,2lf382016201 gil46255022|ref|NM 182918,2|[46255022] gil41281980lrefINM 182919.1[[41281980] gil33624895|ref|NM 182920.1|[33624895] gi|33624901|ref|NM 182921.1|[33624901] gi|41281995|ref|NM 182922.1|[41281995] gi|41055203|ref|NM 182923,2|[41055203] gi[33667116]ref[NM\_182924.1][33667116] gi|33667110|ref|NM\_182925.1|[33667110] gi|33620774|ref|NM\_182926.1|[33620774] gi|33636767|ref|NM\_182931.1|[33636767] gi|33946303|ref|NM\_182932.1|[33946303] gil33946305|ref|NM 182933.1|[33946305] gl[33636774]ref[NM 182934.1][33636774] gi[33636770]ref[NM\_182935.1[[33636770] gi[33946307]ref[NM 182936.1][33946307] gi|33636741|ref|NM\_182943.1|[33636741] gi|33946316|ref|NM\_182944.1|[33946316] gi|33946318|ref|NM\_182945.1|[33946318] gil33946320lrefINM 182946,1[[33946320] gil33667114lrefINM 182947.1I[33667114] gil46909585|ref|NM 182948,2|[46909585] gi|45545422|ref|NM\_182960.2|[45545422] gi|41281986|ref|NM\_182961.1|[41281986] gil33946284|ref|NM 182962.1|[33946284] gi|38044283|ref|NM 182964.3|[38044283] g||41282001|ref|NM\_182965.1|[41282001] gi|33667052|ref|NM 182966.1|[33667052] gi|36054149|ref|NM\_182970.2|[36054149] gil33667031[refINM 182971.1][33667031] gi[33667027]ref[NM\_182972.1][33667027] gi|33667062|ref|NM\_182973.1|[33667062] gi|33667064|ref|NM\_182974.1|[33667064] gi|33946294|ref|NM\_182975.1|[33946294] gi|33946296|ref|NM\_182976.1|[33946296] gl|33695085|ref|NM\_182977.1|[33695085] gi|33695152|ref|NM\_182978.1|[33695152] gi|33695098|ref|NM 182980.1|[33695098] gi|33695100|ref|NM\_182981.1|[33695100] gl|33695160|ref|NM\_182982.1|[33695160] gi|33695154|ref|NM\_182983.1|[33695154] gi|34222388|ref|NM\_182984.2|[34222388] gil37595542|ref|NM 182985,2|[37595542] gil46358067[refINM 183001,2][46358067] gil33946310lreflNM 183002.1[[33946310] gi|33859846|ref|NM 183003.1|[33859846] gi|37537715|ref|NM 183004.3|[37537715] gi|33859836|ref|NM\_183005.1|[33859836] gi|34335250|ref|NM\_183006.1|[34335250] gi|41281992|ref|NM\_183008.1|[41281992] gi|33946279|ref|NM\_183009.1||33946279| gij41327159jrefjNM\_183010.1j[41327159] gil34335221lrefINM 183011.1|[34335221] gil34335223|ref|NM 183012.1|[34335223]

gil34335225lrefINM 183013.1lf343352251 gi|34304367|ref|NM 183040.1|[34304367] gi|34304369|ref|NM 183041.1|[34304369] gil34305292|ref|NM 183043.1|[34305292] gi|34305294|ref|NM 183044.1|[34305294] gi|34305296|ref|NM 183045.1|[34305296] gi|34335261|ref|NM 183047.1|[34335261] gi|34335263|ref|NM 183048.1|[34335263] gi|34013529|ref|NM\_183049.1|[34013529] gi|34101271|ref|NM\_183050.1|[34101271] gi|34452692|ref|NM\_183057.1|[34452692] gi|34098967|ref|NM\_183058.1|[34098967] gi|34098969|ref|NM\_183059.1|[34098969] gi|34335227|ref|NM\_183060.1|[34335227] gi|38176298|ref|NM\_183062.2|[38176298] gi|34304330|ref|NM\_183063.1|[34304330] gli34101277 refiNM 183065.1 [34101277] gi|34098958|ref|NM\_183075.1|[34098958] gi|34304335|ref|NM 183078.1|[34304335] gi|34335269|ref|NM\_183079.1|[34335269] aii34485715|ref|NM\_183227.1|[34485715] gi|38045958|ref|NM\_183228.1|[38045958] gi|38045960|ref|NM 183229.1|[38045960] gi|38045962|ref|NM 183230,1|[38045962] gi|38045964|ref|NM 183231.1|[38045964] gi|38045966|ref|NM 183232.1|[38045966] gi|34734072|ref|NM\_183233.1|[34734072] gi|34485705|ref|NM 183234.1|[34485705] gi|34485708|ref|NM 183235.1|[34485708] gi|34485710|ref|NM 183236.1|[34485710] gij34304332|ref|NM 183237.1|[34304332] gi|34222390|ref|NM 183238.1|[34222390] gi|38016130|ref|NM 183239.1|[38016130] gi|34222394|ref|NM\_183240.1|[34222394] gi|39930540|ref|NM\_183241.1|[39930540] gi|34304112|ref|NM\_183242.1|[34304112] gi|34328927|ref|NM 183243.1|[34328927] gi|34304353|ref|NM 183244.1|[34304353] gli34304378|ref|NM 183245.1|[34304378] gi|34304355|ref|NM\_183246.1|[34304355] gi|34304346|ref|NM\_183247.1|[34304346] gi|34452729|ref|NM\_183323.1|[34452729] gl|34452687|ref|NM\_183337.1|[34452687] gi|34335133|ref|NM\_183352.1|[34335133] gi|34452685|ref|NM\_183353.1|[34452685] gi|34452702|ref|NM\_183356.1|[34452702] gi|34486091|ref|NM 183357.1|[34486091] gi|34452708|ref|NM 183359.1|[34452708] gi|37577094|ref|NM 183360.1|[37577094] gi|37577096|ref|NM 183361.1|[37577096] gl|41582235|ref|NM 183372.2|[41582235] gi|42476062|ref|NM 183373.2|[42476062] gi|34419648|ref|NM\_183374.1|[34419648] gil34419638|refINM 183375.1|[34419638] gil34419646|refINM 183376,1|[34419646] gil34452694|refINM 183377.1|[34452694] gil34419640|refINM 183378.1|[34419640]

aii34419642Iref|NM 183379.1|[34419642] gi|34577046|ref|NM\_183380.1|[34577046] gi|34577086|ref|NM\_183381.1|[34577086] gi|34577088|ref|NM 183382,1|[34577088] gi|34577090|ref|NM 183383.1|[34577090] gi|34577092|ref|NM\_183384.1|[34577092] gi|34577070|ref|NM\_183385.1|[34577070] gi|34577072|ref|NM 183386.1|[34577072] gi|34485719|ref|NM 183387.1|[34485719] gi|34452710|ref|NM\_183393.1|[34452710] gi|34452712|ref|NM\_183394.1|[34452712] gi|34878689|ref|NM\_183395.1|[34878689] gi|34452735|ref|NM\_183397.1|[34452735] gi|34577095|ref|NM\_183398.1|[34577095] ali34577097iref|NM\_183399.1|[34577097] gi|34577099|ref|NM 183400.1|[34577099] gi|34577101|ref|NM 183401.1|[34577101] gi|34577076|ref|NM\_183404.1|[34577076] gi|34878748|ref|NM 183412.1|[34878748] gi|34878752|ref|NM\_183413.1|[34878752] gi|35493944|ref|NM\_183414.1|[35493944] gi|35493951|ref|NM\_183415.1|[35493951] gi|41393558|ref|NM\_183416.2|[41393558] all35493753[ref[NM\_183418.1][35493753] gi|35493800|ref|NM\_183419.1|[35493800] gi|34878764|ref|NM\_183420.1|[34878764] gi|34878768|ref|NM\_183421.1|[34878768] gl|34556206|ref|NM\_183422.1|[34556206] gi|34577104|ref|NM\_183425.1|[34577104] gi|34577109|ref|NM\_184041.1|[34577109] gi|35493718|ref|NM\_184042.1|[35493718] gi|34577111|ref|NM\_184043.1|[34577111] gi|34878835|ref|NM\_184085.1|[34878835] gi|34878843|ref|NM\_184086.1|[34878843] gi|34878851|ref|NM\_184087.1|[34878851] ali37577147|ref|NM\_184231.1|[37577147] gi|35493810|ref|NM\_184234.1|[35493810] gi|35493816|ref|NM\_184237.1|[35493816] gi|35493821|ref|NM\_184241.1|[35493821] g||35493828|ref|NM\_184244.1|[35493828] gi|34878869|ref|NM\_187841.1|[34878869] gij34740336|ref|NM\_194071.1|[34740336] gi|34850056|ref|NM\_194072.1|[34850056] gi|34740328|ref|NM\_194247.1|[34740328] gi|34740330|ref|NM\_194248.1|[34740330] gi|34740338|ref|NM\_194249.1|[34740338] gi|34740326|ref|NM\_194250.1|[34740326] gi|34740332|ref|NM\_194251.1|[34740332] gi|34740324|ref|NM\_194252.1|[34740324] gi|34808709|ref|NM\_194255.1|[34808709] gi|35493986|ref|NM\_194259.1|[35493986] gi|35493995|ref|NM\_194260.1|[35493995] gi|35494002|ref|NM 194261.1|[35494002] gi|34915991|ref|NM 194270.1|[34915991] gi|37595538|ref|NM\_194271.1|[37595538] gi|34915997|ref|NM 194276.1|[34915997 gi|34915999|ref|NM\_194277.1|[34915999]

gil44890061 refINM 194278.2 [44890061] gil34996486|ref|NM 194279.1|[34996486] gi|42822883|ref|NM 194281.2|[42822883] gi[34996482|ref|NM 194282.1|[34996482] gi|34916003|ref|NM 194283.1|[34916003] gi[34916005|ref[NM\_194284.1][34916005] gi|39930546|ref|NM\_194285.1|[39930546] gij50083280|ref|NM\_194286.2|[50083280] gil34916009|refINM 194287,1|[34916009] gil34916011|refINM 194288.1|[34916011] gil34916013|refINM 194289.1|[34916013] gil34916017/refINM 194290,1/34916017 gil35038578|ref|NM 194291,1|[35038578] gil35038600|ref|NM 194292,1|[35038600] gil40255271|ref|NM 194293,2|[40255271] gi|34916023|ref|NM 194294,1|[34916023] gi|34916015|ref|NM 194295.1|[34916015] gl[34916027]ref[NM\_194298.1][34916027] gi|34916021|ref|NM\_194299.1|[34916021] ail34916031|ref|NM\_194300.1|[34916031] gil34916025|ref|NM 194302.1|[34916025] gil34916035|ref|NM 194303,1|[34916035] gi|34916043|ref|NM 194309.1|[34916043] gil34916037lreflNM 194310.1l[34916037] gi|34916041|ref|NM 194312.1|[34916041] gi|34916049|ref|NM 194313.1|[34916049] gi|34916045|ref|NM\_194314.1|[34916045] gi|37577125|ref|NM\_194315.1|[37577125] gi|37577127|ref|NM\_194316.1|[37577127] gi|50355992|ref|NM\_194317.2|[50355992] gi|46358363|ref|NM\_194318.2|[46358363] gi|34996524|ref|NM\_194319.1|[34996524] gij34996534|ref|NM\_194320.1|[34996534] gl|35493852|ref|NM\_194322.1|[35493852] gi|35493859|ref|NM\_194323.1|[35493859] gi|34996532|ref|NM\_194324.1|[34996532] glj34996520|ref|NM 194325.1|[34996520] gi[34996526]ref[NM 194326.1][34996526] gi[34996518]ref[NM\_194327.1][34996518] gi|37577176|ref|NM\_194328.1|[37577176] gi|37577178|ref|NM\_194329.1|[37577178] gi|37577180|ref|NM\_194330.1|[37577180] gi|37577182|ref|NM\_194331.1|[37577182] gil37577184lreflNM 194332.11[37577184] all37588855irefINM 194352.1l[37588855] gii37577161[ref|NM 194356.1][37577161] gli37588858|ref|NM 194358.1|[37588858] gi[37588860]ref[NM 194359.1][37588860] gi|38158019|ref|NM 194428.1|[38158019] gi|36287109|ref|NM\_194429.1|[36287109] gil37577169lrefINM 194430.1lf375771691 gil37577171IrefINM 194431.1[37577171] gi|37588849|ref|NM\_194434.1|[37588849] gil37588852|ref|NM 194435.1|[37588852] gi|37595755|ref|NM 194436.1|[37595755] gi[37059809]ref[NM\_194439.1][37059809] gi|37221188|ref|NM\_194441.1|[37221188]

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gi|41872402|ref|NM 201398.1|[41872402] g||41352702|ref|NM 201399.1|[41352702] gil42476336|ref|NM\_201400.1|[42476336] gi|41349931|ref|NM\_201402.1|[41349931] gi|41406060|ref|NM\_201403.1|[41406060] gi|41393553|ref|NM\_201412.1|[41393553] gi|41406054|ref|NM\_201413.1|[41406054] gi|41406056|ref|NM 201414.1|[41406056] gi|41393607|ref|NM 201428,1|[41393607] gi|41393603|ref|NM 201429.1|[41393603] gi|41393605|ref|NM 201430.1|[41393605] gi|41393609|ref|NM 201431.1|[41393609] gi|41406077|ref|NM\_201432.1|[41406077] gi|41406079|ref|NM\_201433.1|[41406079] gi|41393613|ref|NM\_201434.1|[41393613] gi|42475943|ref|NM\_201435.1|[42475943] gi|41406066|ref|NM\_201436.1|[41406066] gi|45439354|ref|NM 201437,1|[45439354] gi|41872338|ref|NM 201438,1|[41872338] gi|41872343|ref|NM 201439,1|[41872343] gi|41872348|ref|NM 201440,1|[41872348] gi|46411155|ref|NM 201441.1|[46411155] gi|41393601|ref|NM\_201442.1|[41393601] gi|46411158|ref|NM\_201443.1|[46411158] gi|41872487|ref|NM\_201444.2|[41872487] gi|41872493|ref|NM\_201445.1|[41872493] gi|41393582|ref|NM\_201446.1|[41393582] gi|42558280|ref|NM\_201453.1|[42558280] gi|41872367|ref|NM\_201515.1|[41872367] gi|41406068|ref|NM 201516,1|[41406068] gi|41406070|ref|NM\_201517.1|[41406070] gi|41462411|ref|NM\_201520.1|[41462411] gi|41871945|ref|NM 201521.1|[41871945] gi[41871954|ref[NM\_201522.1][41871954] gi|41871959|ref|NM\_201523.1|[41871959] gi|41584201|ref|NM\_201524.1|[41584201] g||41584197|ref|NM\_201525.1||41584197| gi]41582238|ref|NM 201526,1|[41582238] gl|41872521|ref|NM\_201532.1|[41872521] gi|41872526|ref|NM 201533.1|[41872526] gi|42544210|ref|NM 201535.1|[42544210] ail42544212|ref|NM\_201536.1|[42544212] gi|42544215|ref|NM 201537.1|[42544215] gil42544217 ref|NM\_201538.1 [42544217] g||42544219|ref|NM\_201539.1||42544219| gi|42544221|ref|NM\_201540.1|[42544221] gi|42544223|ref|NM\_201541.1|[42544223] gi|48762707|ref|NM\_201542.2|[48762707] gi|42544186|ref|NM\_201543.1|[42544186] gi|42544190|ref|NM 201544,1|[42544190] gi|42544192|ref|NM 201545,1|[42544192] gi|41680634|ref|NM\_201546.1|[41680634] gi|41680687|ref|NM 201548.1|[41680687] gi|41680693|ref|NM 201550.1|[41680693] gi|42544199|ref|NM\_201552.1|[42544199] gi|42544201|ref|NM\_201553.1|[42544201]

gi|41872499|ref|NM 201554.1|[41872499]

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gi|42544160|ref|NM 202003.1|[42544160] gi|44829052|ref|NM 202004.2|[44829052] gi|42544148|ref|NM 202467.1|[42544148] gi|42544143|ref|NM\_202468.1|[42544143] gi|42544145|ref|NM 202469.1|[42544145] gi|42544139|ref|NM 202470.1|[42544139] gi|42544141|ref|NM 202494.1|[42544141] gi|42544116|ref|NM\_202758.1|[42544116] gi|42544181|ref|NM\_203281.1|[42544181] gi|42543993|ref|NM\_203282.1||425439931 gi|42560224|ref|NM\_203283.1|[42560224] gi|42560222|ref|NM\_203284.1|[42560222] gi|42560230|ref|NM 203285,1|[42560230] gi|42560232|ref|NM 203286,1|[42560232] gi|42714663|ref|NM 203287.1|[42714663] gi|42718019|ref|NM\_203288.1|[42718019] gi|42560241|ref|NM 203289.1|[42560241] gi|42560245|ref|NM\_203290.1|[42560245] gi|42718014|ref|NM\_203291.1|[42718014] gi|42718016|ref|NM\_203292.1|[42718016] gi|44680121|ref|NM 203293,1|[44680121] gil44680123|ref|NM 203294.1|[44680123] gl|44680125|ref|NM 203295.1||44680125| gi|44680127|ref|NM 203296.1|[44680127] gi|44680129|ref|NM 203297.1|[44680129] gi|42558251|ref|NM 203298.1|[42558251] gi|42558253|ref|NM\_203299.1|[42558253] gl|42558257|ref|NM\_203301.1|[42558257] gil45238852|ref|NM\_203302.2|[45238852] gil42558259lrefINM 203303.1lf425582591 gli42558261lrefINM 203304.1li425582611 gil42558263lrefINM 203305.1l[42558263] gi|42558267|ref|NM\_203306.1|[42558267] gi|42627890|ref|NM\_203307.1|[42627890] gli42558265lrefINM 203308.1[[42558265] gi|42558269|ref|NM 203309.1|[42558269] gi|42600568|ref|NM\_203311.1|[42600568] gi|44680135|ref|NM\_203314.1|[44680135] gi|44680132|ref|NM\_203315.1|[44680132] gi|42794010|ref|NM\_203316.1|[42794010] gi|42794778|ref|NM\_203318.1|[42794778] gil42716304|ref|NM 203326,1|[42716304] gi|44680147|ref|NM 203327.1|[44680147] gi|42761473|ref|NM 203329.1|[42761473] gi|42716301|ref|NM 203330.1|[42716301] gi|42716298|ref|NM 203331.1|[42716298] gi|42740906|ref|NM 203339.1|[42740906] gi|42741649|ref|NM 203341.1|[42741649] gi|42716290|ref|NM\_203342.1|[42716290] gi|42716288|ref|NM\_203343.1|[42716288] gi|42741651|ref|NM\_203344.1|[42741651] gi|42716279|ref|NM\_203346.1|[42716279] gil42714610lrefINM 203347.1l[42714610] gil42733591|ref|NM 203348.1|[42733591] gil44680158|ref|NM 203349.2|[44680158] gil42741683|ref|NM 203350.1|[42741683] gi|42794766|ref|NM 203351.1|[42794766]

gi|42741674|ref|NM 203352,1|[42741674] gi|42741676|ref|NM\_203353.1|[42741676] gi|42740904|ref|NM\_203354.1|[42740904] gi|42740898|ref|NM 203355,1|[42740898] gi|42740900|ref|NM\_203356.1|[42740900] gi|42740894|ref|NM\_203357.1|[42740894] gi|42734502|ref|NM\_203364.1|[42734502] gi|47132516|ref|NM\_203365.2|[47132516] gi|42766423|ref|NM\_203370.1|[42766423] gi|42766421|ref|NM 203371.1|[42766421] gi|42794753|ref|NM 203372.1|[42794753] gi|42794272|ref|NM 203373,1|[42794272] gi|42794621|ref|NM\_203374.1|[42794621] gi|42794615|ref|NM\_203375.1|[42794615] gi|42794617|ref|NM 203376.1|[42794617] gi|44955884|ref|NM\_203377.1|[44955884] gi|44955887|ref|NM\_203378.1|[44955887] gi|42794757|ref|NM\_203379.1|[42794757] gi|42794759|ref|NM\_203380.1|[42794759] gi|42794274|ref|NM\_203381.1|[42794274] gi|42822892|ref|NM\_203382.1|[42822892] gi|42822871|ref|NM 203383.1|[42822871] gi|42794607|ref|NM\_203384.1|[42794607] gi|42822873|ref|NM\_203385.1|[42822873] gi|42822869|ref|NM\_203386.1|[42822869] gi|42822867|ref|NM\_203387.1|[42822867] gi|42822863|ref|NM\_203388.1|[42822863] gi|42822865|ref|NM\_203389.1|[42822865] gl|42794262|ref|NM\_203390.1|[42794262] gi|42794762|ref|NM\_203391.1|[42794762] gi|42794268|ref|NM 203392.1|[42794268] gi|42794613|ref|NM\_203393.1|[42794613] gi|44955909|ref|NM 203394.1|[44955909] gi|42794270|ref|NM 203395.1|[42794270] gll44890049|ref|NM 203399.1|[44890049] gi|42821107|ref|NM\_203400.1|[42821107] gi|44890051|ref|NM\_203401.1|[44890051] gi|42822881|ref|NM\_203402.1|[42822881] gl|42822875|ref|NM\_203403.1|[42822875] gi|42822877|ref|NM\_203405.1|[42822877] all42822879|ref|NM\_203406.1|[42822879] gi|42821109|ref|NM\_203407.1|[42821109] gi|42821113|ref|NM 203408.1|[42821113] gi|44662812|ref|NM\_203411.1|[44662812] gl|44662818|ref|NM\_203412.1|[44662818] gi|44662831|ref|NM 203413.1|[44662831] gi|44662825|ref|NM\_203414.1|[44662825] gi|44662827|ref|NM\_203415.1|[44662827] gi|44889962|ref|NM\_203416.1|[44889962] gi|44680107|ref|NM 203417.1|[44680107] gi|44680109|ref|NM 203418.1|[44680109] gi|44662814|ref|NM 203419,1|[44662814] gi|44662820|ref|NM 203422.1|[44662820] gi|44662802|ref|NM\_203423.1|[44662802] gi|44662816|ref|NM\_203424.1|[44662816] gi|44662806|ref|NM\_203425.1|[44662806] gil44680152[refINM 203426.1][44680152]

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gi|44680116|ref|NM\_203428.1|[44680116] gil44680118lreflNM 203429.1l[44680118] gil45439310lreflNM 203430.1l[45439310] gil45439312IrefINM 203431.1I[45439312] gil44680113lrefINM 203433.1[[44680113] gil44681485|ref|NM 203434.1|[44681485] gil44771205|ref|NM 203436.1|[44771205] gi|50409938|ref|NM 203437.2|[50409938] gi|50409606|ref|NM 203438.2|[50409606] gi[50409576]ref[NM 203439.2][50409576] gi[50408561]ref[NM 203440.2][50408561] gi[50409592|ref|NM\_203441.2|[50409592] gi|45243523|ref|NM 203444.1|[45243523] gil45243526lrefINM 203445.1l[45243526] gi|44889476|ref|NM\_203446.1|[44889476] gi|44889959|ref|NM\_203447.1|[44889959 gi|44888813|ref|NM\_203448.1|[44888813] gil44888824lreflNM 203451.1[[44888824] gi|44888826|ref|NM\_203452.1|[44888826] gi|44888828|ref|NM\_203453.1|[44888828] gi|44888830|ref|NM 203454.1|[44888830] gi|45439315|ref|NM\_203456.1|[45439315] gi|45439317|ref|NM\_203457.1|[45439317] gil46397352lrefINM 203458.2l[46397352] gil44955928lrefINM 203459.1l[44955928] g||44921607|ref|NM\_203462.1|[44921607] gi|45007001|ref|NM\_203463.1|[45007001] gil45439343|ref|NM 203466.1|[45439343] gil45439345[ref]NM 203467.1[[45439345] gij45827717[ref]NM 203468.1[[45827717] gi|45439324|ref|NM 203471.1|[45439324] gil45439348lrefINM 203472.1[[45439348] gil45439330lrefINM 203473.1[[45439330] gil45439332lreflNM 203474.1l[45439332] gi|45439334|ref|NM\_203475.1|[45439334] gi|45439336|ref|NM\_203476.1|[45439336] gi|45238850|ref|NM\_203477.1|[45238850] gi|45120103|ref|NM\_203481.1|[45120103] gil45243560lrefINM 203486.1[[45243560] gli45243533|ref|NM 203487.1|[45243533] gl|45243546|ref|NM 203488.1|[45243546] gi|45267834|ref|NM 203494.1|[45267834] gi|45333905|ref|NM\_203495.1|[45333905] gi|45333908|ref|NM 203497.1|[45333908] gi|45446746|ref|NM\_203499.1|[45446746] gi|45269144|ref|NM\_203500.1|[45269144] gi|45580691|ref|NM 203503.1|[45580691] gil45359845lreflNM 203504.1[[45359845] gi|45359848|ref|NM 203505.1|[45359848] gi|45359858|ref|NM 203506.1|[45359858] gi|48375168|ref|NM 203510.1|[48375168] gi|45387928|ref|NM 205543.1|[45387928] gi|45387924|ref|NM\_205545.1|[45387924] gi|45387930|ref|NM\_205548.1|[45387930] gil45387954lrefINM 205767.1[[45387954] gil45439301lrefINM 205768.1[[45439301] gil45505168|ref|NM 205833.1|[45505168]

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gi|47777760|ref|NM 205834.2|[47777760] gi|47777678|ref|NM 205835.2|[47777678] gi|45545408|ref|NM\_205836.1|[45545408] gi|45505160|ref|NM\_205837.1|[45505160] gi|45505156|ref|NM\_205838.1|[45505156] gi|45580739|ref|NM\_205839.1|[45580739] gi|45580735|ref|NM\_205840.1|[45580735] gi|45505158|ref|NM\_205841.1|[45505158] gil45545410|ref|NM 205842.1|[45545410] gi|45505150|ref|NM 205843.1|[45505150] gi|45446744|ref|NM\_205845.1|[45446744] gi|45593131|ref|NM\_205846.1|[45593131] gi|45447089|ref|NM 205847,1|[45447089] ail45504375|ref|NM\_205848.1|[45504375] gii45504370|ref|NM\_205849.1|[45504370] gil45504368|ref|NM\_205850,1|[45504368] gil45504360lreflNM 205852.1[45504360] gil45504354lreflNM 205853.1[[45504354] gi|45504356|ref|NM\_205854.1|[45504356] gi|45504350|ref|NM\_205855.1|[45504350] gi|45504352|ref|NM\_205856.1|[45504352] gi|45504347|ref|NM\_205857.1|[45504347] gi|45505144|ref|NM\_205858.1|[45505144] gi|45504345|ref|NM\_205859.1|[45504345] gi|45545404|ref|NM 205860,1|[45545404] gi|45580737|ref|NM 205861,1|[45580737] gi]45827766|ref|NM 205862.1|[458277661 9I|45505183|ref|NM 205863.1|[45505183] gi|45505177|ref|NM 205864.1|[45505177] gi|45580695|ref|NM\_206538.1|[45580695] gi|45593146|ref|NM\_206539.1|[45593146] 9i|45545426|ref|NM\_206594.1|[45545426] gi|45545428|ref|NM 206595,1|[45545428] gi|45545436|ref|NM 206808.1|[45545436] gi|45580731|ref|NM 206809.1|[45580731] gij45545418|ref|NM 206810.1|[455454181 gi|45545412|ref|NM\_206811.1|[45545412] gi|45580733|ref|NM 206812.1|[45580733] gi|45545414|ref|NM 206813.1|[45545414] gi|45593133|ref|NM 206814.1|[45593133] gi|45580716|ref|NM 206817.1|[45580716] gi|45580718|ref|NM\_206818.1|[45580718] gi|46049124|ref|NM\_206819.1|[46049124] gi|46049118|ref|NM 206820.1|[46049118] gil46049109|ref|NM\_206821.1|[46049109] gi|45827738|ref|NM\_206824.1|[45827738] gil45643126|ref|NM 206825.1|[45643126] gi|45643128|ref|NM 206826.1|[45643128] gi|45592962|ref|NM 206827,1|[45592962] gi|45593127|ref|NM 206828.1|[45593127] gi|45592951|ref|NM 206831.1|[45592951] gi|45592948|ref|NM 206832.1|[45592948] gi|45592953|ref|NM 206833.1|[45592953] gi|45597461|ref|NM 206834.1|[45597461] gi|45594313|ref|NM\_206835.1|[45594313] gi|45643120|ref|NM\_206836.1|[45643120] gi|45643130|ref|NM 206837,1|[45643130]

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gi|45594507|ref|NM\_206838.1|[45594507] gi|45643134|ref|NM\_206839.1|[45643134] gl|45643124|ref|NM\_206840.1|[45643124] gi|45827749|ref|NM\_206841.1|[45827749] gi|45827775|ref|NM\_206852.1|[45827775] gi|45827707|ref|NM\_206853.1|[45827707] gi|45827709|ref|NM 206854.1|[45827709] gi|45827711|ref|NM 206855.1|[45827711] gi|45827777|ref|NM 206857.1|[45827777] gii46049056|ref|NM\_206858.1|[46049056] gi|45827752|ref|NM 206860,1|[45827752] qi|45827754|ref|NM\_206861.1|[45827754] gi|45827756|ref|NM\_206862.1|[45827756] gi|45827689|ref|NM\_206866.1|[45827689] gi[45827797]ref[NM\_206873.1][45827797] gi[46249375]ref[NM\_206876.1][46249375] gi|46249377|ref|NM\_206877.1|[46249377] gi|46047428|ref|NM\_206880.1|[46047428] gi|45827799|ref|NM 206883,1|[45827799] gi|45827801|ref|NM 206884.1|[45827801] gi|45827803|ref|NM 206885,1|[45827803] gi|46047434|ref|NM 206886,1|[46047434] gi|45827725|ref|NM 206887,1|[45827725] gl|45827693|ref|NM 206889.1|[45827693] gi|45827695|ref|NM\_206890.1|[45827695] gi|45827697|ref|NM\_206891.1|[45827697] gi|46047431|ref|NM\_206892.1|[46047431] gi|46195766|ref|NM\_206893.1|[46195766] gi|46047454|ref|NM\_206894.1|[46047454] gi|46047466|ref|NM\_206895.1|[46047466] gl|45827703|ref|NM 206898.1|[45827703] gi|46255004|ref|NM 206900.1|[46255004] gi|46255006|ref|NM 206901.1|[46255006] gi|46255008|ref|NM 206902.1|[46255008] gi|47458814|ref|NM\_206907.2|[47458814] gi|45827779|ref|NM\_206908.1|[45827779] gi|45827715|ref|NM\_206909.1|[45827715] gi|45827781|ref|NM 206910.1|[45827781] gi|45827783|ref|NM\_206911.1|[45827783] gi|45827785|ref|NM\_206912.1|[45827785] gi|45827722|ref|NM\_206914.1|[45827722] gi|46094059|ref|NM 206915.1|[46094059] gi|46094061|ref|NM\_206917.1|[46094061] gi|46048444|ref|NM\_206918.1|[46048444] gi[51011132|ref|NM\_206919.1|[51011132] gi|46048447|ref|NM\_206920.1|[46048447] gi|46048451|ref|NM\_206921.1|[46048451] gi|46048454|ref|NM 206922.1|[46048454] gi|46048457|ref|NM\_206923.1|[46048457] gil45935382lrefINM 206925.1 [45935382] gi|47578100|ref|NM\_206926.1|[47578100] gil46255061|refINM\_206927.1|[46255061] gil46255063|ref|NM 206928.1|[46255063] gi|46255065|ref|NM 206929.1|[46255065] gi|46255067|ref|NM 206930.1|[46255067] gi|46249405|ref|NM 206933.1|[46249405] gi|46255051|ref|NM\_206937.1|[46255051]

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gi|46249346|ref|NM\_206938.1|[46249346] gi|46249356|ref|NM\_206939.1|[46249356] gi|46249358|ref|NM 206940.1|[46249358] gi|46249413|ref|NM\_206943.1|[46249413] gi|45935359|ref|NM\_206944.1|[45935359] gi|45935361|ref|NM 206945,1|[45935361] gi|45935363|ref|NM 206946.1|[45935363] gi|45935365|ref|NM 206947.1|[45935365] gi|45935367|ref|NM 206948.1|[45935367] gi|46048519|ref|NM 206949.1|[46048519] gi|46249366|ref|NM 206953.1|[46249366] gi|46249368|ref|NM\_206954.1|[46249368] gi|46249370|ref|NM\_206955.1|[46249370] gi|46249372|ref|NM\_206956.1|[46249372] gi|46249415|ref|NM\_206961.1|[46249415] gi|46255048|ref|NM\_206962.1|[46255048] gi|46255042|ref|NM\_206963.1|[46255042] gi|46255031|ref|NM 206964.1|[46255031] gi|46255034|ref|NM\_206965.1|[46255034] gi|46195432|ref|NM 206966.1|[46195432] g||47894448|ref|NM 206967.1|[47894448] gi|46370076|ref|NM 206994.1|[46370076] gi|46240863|ref|NM 206996.1|[46240863] gi|46243670|ref|NM 206997.1|[46243670] gi|46240865|ref|NM\_206998.1|[46240865] gi|46275836|ref|NM\_206999.1|[46275836] gil46276879|ref|NM\_207002.1|[46276879] gil46276881 refINM 207003.1 [46276881] gil46877101|refINM 207005.1|[46877101] gi|46255016|ref|NM\_207006.1|[46255016] gi|48949836|ref|NM\_207007.2|[48949836] gi|46358410|ref|NM\_207009.2|[46358410] gi|46370094|ref|NM\_207012.1|[46370094] gi|46276892|ref|NM\_207013.1|[46276892] gi|46276884|ref|NM\_207014.1|[46276884] gi|47777356|ref|NM\_207015.1|[47777356] gi|46370059|ref|NM\_207032.1|[46370059] gi|46370061|ref|NM\_207033.1|[46370061] gi|46370063|ref|NM\_207034.1|[46370063] gi|46309850|ref|NM\_207035.1|[46309850] gi|46370079|ref|NM\_207036.1|[46370079] gi|46370081|ref|NM\_207037.1|[46370081] gi|46370083|ref|NM 207038.1|[46370083] gi|46370085|ref|NM 207040.1|[46370085] gi|46389549|ref|NM 207042.1|[46389549] gi|46389551|ref|NM 207043.1|[46389551] gi|46389553|ref|NM\_207044.1|[46389553] gi|46389555|ref|NM 207045.1|[463895551 gi|46389557|ref|NM 207046.1|[46389557] gil46389559|ref|NM 207047.1|[46389559] gi|46358079|ref|NM\_207102.1|[46358079] gil46358065lrefINM 207103.1IJ463580651 gil47578094lrefINM 207106.1[[47578094] gil47578096|ref|NM 207107.1|[47578096]

gi|46488920|ref|NM\_207108.1|[46488920] gi|46370055|ref|NM\_207111.2|[46370055] gi|46361986|ref|NM\_207112.1|[46361986]

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gi|46361975|ref|NM\_207113.1|[46361975] gi|46361969|ref|NM\_207115.1|[46361969] gi|46370056|ref|NM\_207116.1|[46370056] gi|46397376|ref|NM\_207117.2|[46397376] gi|46359854|ref|NM\_207118.1|[46359854] gi|46397368|ref|NM\_207119.1|[46397368] gi|46402320|ref|NM 207121,2|[46402320] gi|46370068|ref|NM 207122.1|[46370068] gi|46370070|ref|NM\_207123.1|[46370070] gi|46397311|ref|NM 207125.1|[46397311] gi|46397313|ref|NM 207126,1|[46397313] gil46397307|ref|NM\_207127.1|[46397307] gi|46397309|ref|NM\_207128.1|[46397309] gi|46397305|ref|NM\_207129.1|[46397305] gi|46389561|ref|NM\_207168.1|[46389561] gi|46371997|ref|NM\_207170.1|[46371997] gil46397393|ref|NM 207171.1|[46397393] gi|46395495|ref|NM 207172.1|[46395495] gi|46391084|ref|NM 207173.1|[46391084] gi|46592955|ref|NM 207174.1|[46592955] gi|46397399|ref|NM 207181.1|[46397399] gi|46395478|ref|NM\_207186.1|[46395478] gi|46399199|ref|NM\_207189.1|[46399199] gi|46909591|ref|NM\_207191.1|[46909591] gi|46909593|ref|NM\_207194.1|[46909593] gil46909595|refINM 207195,1|[46909595] gi|46909597|ref|NM\_207196.1|[46909597] ai|46909599|ref|NM 207197.1|[46909599] gl|46402495|ref|NM 207283.1|[46402495] gi|46402493|ref|NM\_207284.1|[46402493] gl|46402501|ref|NM\_207285.1|[46402501] gi|46402497|ref|NM\_207286.1|[46402497] gi|46402505|ref|NM\_207287.1|[46402505] gi|46402499|ref|NM\_207288.1|[46402499] gi|46402508|ref|NM\_207289.1|[46402508] gi|46402503|ref|NM\_207290.1|[46402503] gi|46877104|ref|NM\_207291.1|[46877104] gi|46411163|ref|NM\_207292.1|[46411163] gi|46411165|ref|NM\_207293.1|[46411165] gi|46411167|ref|NM\_207294.1|[46411167] gi|46411169|ref|NM\_207295.1|[46411169] gi|46411171|ref|NM 207296.1|[46411171 gi|46411173|ref|NM 207297.1|[46411173] gi|46877065|ref|NM 207299.1|[46877065] gi|46410930|ref|NM 207303.1|[46410930] gi|46411179|ref|NM\_207304.1|[46411179] gi|46409253|ref|NM\_207305.1|[46409253] gi|46409257|ref|NM 207306.1|[46409257] gi|46409259|ref|NM\_207307.1|[46409259] gil464092611refINM 207308.11[46409261] gil46409263|ref|NM 207309.1|[46409263] qi|46409265|ref|NM 207310.1|[46409265] gil46409267[ref[NM 207311.1][46409267] gi|46409269|ref|NM 207312.1|[46409269] gi|46560554|ref|NM 207313.1|[46560554] gi|46409271|ref|NM 207314.1|[46409271] gi|46409273|ref|NM 207315.1|[46409273]

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gi|46409275|ref|NM 207316.1|[46409275] gi|46409277|ref|NM 207317.1|[46409277] gi|47271499|ref|NM 207319.2|[47271499] gi|46409281|ref|NM\_207320.1|[46409281] gi|46409283|ref|NM 207321.1|[46409283] gi|46409285|ref|NM\_207322.1|[46409285] gi|46409287|ref|NM\_207323.1|[46409287 gi|46409289|ref|NM\_207324.1|[46409289] gi|46409291|ref|NM\_207325.1|[46409291] gi|46409293|ref|NM 207326,1|[46409293] gil49533620|ref|NM\_207327.3|[49533620] gil46409297|ref|NM\_207328.1|[46409297] gil46409299|ref|NM\_207329.1|[46409299] gi|46409301|ref|NM\_207330.1|[46409301] gi|46575931|ref|NM\_207331.1|[46575931] gi|46409303|ref|NM\_207332.1|[46409303] gi|46559736|ref|NM\_207333.1|[46559736] gi|46409305|ref|NM\_207334.1|[46409305] gi|46409307|ref|NM\_207335.1|[46409307] gi|46409309|ref|NM\_207336.1|[46409309] gi|46559738|ref|NM\_207337.1|[46559738] gi|46409311|ref|NM\_207338.1|[46409311] gi|46409313|ref|NM\_207339.1|[46409313] gi|46409315|ref|NM\_207340.1|[46409315] gi|46409317|ref|NM 207341.1|[46409317] g||46409321|ref|NM\_207343.1|[46409321] gi|46409323|ref|NM\_207344.1|[46409323] gi|46409325|ref|NM 207345.1|[46409325] gi|46559740|ref|NM\_207346.1|[46559740] g||46409327|ref|NM\_207347.1|[46409327] gi|46409329|ref|NM\_207348.1|[46409329] gi|46409331|ref|NM\_207349.1|[46409331] gi|46409333|ref|NM\_207350.1|[464093331 gl|46409335|ref|NM\_207351.1|[46409335] gi|46409337|ref|NM\_207352.1|[46409337] gi|46575927|ref|NM\_207353.1|[46575927] gi|46409339|ref|NM 207354,1|[46409339 gi|46409341|ref|NM\_207355.1|[46409341] gi|46409343|ref|NM 207356,1|[46409343] gi|46409345|ref|NM 207357.1|[46409345] gi|46409347|ref|NM\_207358.1|[46409347] gl|46409349|ref|NM\_207359.1|[46409349] gi|46409355|ref|NM\_207362.1|[46409355] gi|46409385|ref|NM\_207363.1|[46409385] gi|46409359|ref|NM\_207364.1|[46409359] gi|46409353|ref|NM\_207365.1|[46409353] gi|46409363|ref|NM 207366,1|[46409363] gi]46409357|ref|NM 207367.1|[46409357] gi|46409367|ref|NM\_207368.1|[46409367] gi|46409371|ref|NM 207370.1|[46409371] gi|50726976|ref|NM\_207371.2|[50726976] gi|46409365|ref|NM\_207372.1|[46409365] gi|46409375|ref|NM\_207373.1|[46409375] gi|46409369|ref|NM\_207374.1|[46409369] gi|46409379|ref|NM\_207375.1|[46409379] gi|46409373|ref|NM\_207376.1|[46409373] gi|46409383|ref|NM 207377,1|[46409383]

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gi|46409389|ref|NM\_207379.1|[46409389] gi|46409381|ref|NM\_207380.1|[46409381] gi|46409393|ref|NM\_207381.1|[46409393] gi|46409387|ref|NM\_207382.1|[46409387] gi|46409397|ref|NM\_207383.1|[46409397] gi|46409391 |ref|NM\_207384.1 |[46409391] gi|46409401 |ref|NM\_207385.1 | [46409401] gi|46409395|ref|NM\_207386.1|[46409395] gi|46409405|ref|NM 207387,1|[46409405] gi|46409399|ref|NM 207388.1|[46409399] gi|46409409|ref|NM 207389.1|[46409409] gi|46409403|ref|NM 207390.1|[46409403] gi|46409413|ref|NM 207391.1|[46409413] gi|46409407|ref|NM 207392,1|[46409407] gi|46409417|ref|NM\_207393.1|[46409417] gi|46409411|ref|NM\_207394.1|[46409411] gi|46409421|ref|NM\_207395.1|[46409421] gl|46409415|ref|NM\_207396.1|[46409415] gi|46409425|ref|NM\_207397.1|[46409425] gil46409419|ref|NM 207398.1|[46409419] gl|46409429|ref|NM\_207399.1|[46409429] gli46409423 refINM 207400.1 [46409423] gli46409433|refINM\_207401.1|[46409433] gi|46409437|ref|NM 207403,1|[46409437] gi|46559762|ref|NM 207404.2|[46559762] gi|46409441|ref|NM 207405.1|[46409441] gi|46409435|ref|NM\_207406.1|[46409435] gi|46409445|ref|NM\_207407.1|[46409445] gi|46409439|ref|NM\_207408.1|[46409439] gi|46409449|ref|NM\_207409.1|[46409449] gi|46409443|ref|NM\_207410.1|[46409443] gi|46409453|ref|NM\_207411.1|[46409453] gi|46409447|ref|NM\_207412.1|[46409447] gi|46409457|ref|NM\_207413.1|[46409457] gi|46409451|ref|NM\_207414.1|[46409451] gi|46409455|ref|NM\_207416.1|[46409455] gi|46409465|ref|NM\_207417.1|[46409465] gi|48675831|ref|NM 207418.2|[48675831] gi|46409469|ref|NM\_207419.1|[46409469] gi|46409463|ref|NM\_207420.1|[46409463] gi|46409561|ref|NM\_207421.1|[46409561] gi|46409467|ref|NM\_207422.1|[46409467] gi|46409471|ref|NM\_207423.1|[46409471] gi|46409473|ref|NM\_207424.1|[46409473] gi|46409477|ref|NM\_207426.1|[46409477] gi|46409479|ref|NM\_207427.1|[46409479] gil46409481|ref|NM 207428.1|[46409481] gi|46409483|ref|NM\_207429.1|[46409483] gi|46430765|ref|NM\_207430.1|[46430765] gi|46409487|ref|NM\_207432.1|[46409487] gi|46409489|ref|NM\_207433.1|[46409489] gi|46409491|ref|NM 207434.1|[46409491] gil46409493|refINM\_207435.1|[46409493] gil46409495|ref|NM 207436.1|[46409495] gil46409497lrefINM 207437.1[[46409497] gi|46409499|ref|NM\_207438.1|[46409499]

gi|46409377|ref|NM\_207378.1|[46409377]

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gil46559770|ref|NM 207439.2|[46559770] gi|46409503|ref|NM 207440.1|[46409503] gi|46409505|ref|NM 207441.1|[46409505] gi|46409507|ref|NM\_207442.1|[46409507] gi|46409509|ref|NM 207443.1|[46409509] gi|46409511|ref|NM\_207444.1|[46409511] gi|46409513|ref|NM\_207445.1|[46409513] gi|46409515|ref|NM\_207446.1|[46409515] gi|46409517|ref|NM 207447.1|[46409517] gi|46409519|ref|NM 207448,1|[46409519] gi|46409521|ref|NM\_207449.1|[46409521] qi|46409523|ref|NM\_207450.1|[46409523] gi|46409525|ref|NM\_207451.1|[46409525] gi|46409527|ref|NM 207452,1|[46409527] oi|46409529|ref|NM\_207453.1|[46409529] ai|46409531|ref|NM\_207454.1|[46409531] qi|46409539|ref|NM\_207458.1|[46409539] 9i|46409541|ref|NM\_207459.1|[46409541] 9i|46409547|ref|NM\_207460.1|[46409547] 9i|46409543|ref|NM\_207461.1|[46409543] gi|46409551|ref|NM\_207462.1|[46409551] 9i|46409545|ref|NM\_207463.1|[46409545] gi|46409555|ref|NM\_207464.1|[46409555] gi|46409549|ref|NM\_207465.1|[46409549] gi|46409559|ref|NM 207466.1|[46409559] gi|46409553|ref|NM\_207467.1|[46409553] gi|46409565|ref|NM 207468.1|[46409565] gi|46409557|ref|NM 207469.1|[46409557] gi|46409569|ref|NM 207470.1|[46409569] gi|46409563|ref|NM\_207471.1|[46409563] g||46409573|ref|NM\_207472.1|[46409573] gi|46409567|ref|NM\_207473.1|[46409567] gi|46409577|ref|NM\_207474.1|[46409577] gil46409571|ref|NM 207475,1|[46409571] gil46409575|ref|NM 207477,1|[46409575] gi|46409581|ref|NM 207478.1|[46409581] gi|46409583|ref|NM\_207479.1|[46409583] gi|46409585|ref|NM 207480.1|[46409585] gi|46409587|ref|NM 207481.1|[46409587] gi|46409589|ref|NM\_207482.1|[46409589] gi|46409591|ref|NM\_207483.1|[46409591] gi|46409593|ref|NM\_207484.1|[46409593] gi|46409595|ref|NM\_207485.1|[46409595] gil46409597|ref|NM 207486,1|[46409597] gi|46409599|ref|NM\_207487.1|[46409599] gi|46409605|ref|NM\_207488.1|[46409605] gi|46409601|ref|NM 207489,1|[46409601] gi|46409609|ref|NM 207490,1|[46409609] gi|46575933|ref|NM 207491.1|[46575933] gi|46409603|ref|NM\_207492.1|[46409603] gi|46409613|ref|NM 207493.1|[46409613] gi|46409607|ref|NM 207494.1|[46409607] gi|46559764|ref|NM\_207495.2|[46559764] gi|46409611|ref|NM\_207496.1|[46409611] gi|46409621|ref|NM\_207497.1|[46409621] gi|46409615|ref|NM\_207498.1|[46409615] gi|46409623|ref|NM 207499.1|[46409623]

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gi|46409619|ref|NM\_207500.1|[46409619] gi|46409629|ref|NM\_207501.1|[46409629] gi|46409625|ref|NM\_207502.1|[46409625] gi|46409633|ref|NM\_207503.1|[46409633] gi|46409627|ref|NM\_207504.1|[46409627] gi|46409637|ref|NM 207505,1|[46409637] qi|46409631|ref|NM 207506,1|[46409631] gi|46409641|ref|NM 207507.1|[46409641] gi|46409635|ref|NM 207508.1|[46409635] gi|46409643|ref|NM 207509.1|[46409643] gi|46559773|ref|NM 207510.2|[46559773] gi|46409645|ref|NM\_207511.1|[46409645] gi|46409647|ref|NM\_207512.1|[46409647] gi|46409649|ref|NM\_207513.1|[46409649] gi|46447819|ref|NM\_207514.1|[46447819] gi|46447826|ref|NM\_207517.1|[46447826] gi|46909583|ref|NM\_207518.1|[46909583] gi|46488943|ref|NM\_207519.1|[46488943] gil47519489lrefINM 207520.1[47519489] gil47519561|refINM 207521,1|[47519561] gii48375166irefiNM 207577.1|[48375166] gi|46909586|ref|NM 207578.1|[46909586] gi|46485770|ref|NM 207581.1|[46485770] gi|46485772|ref|NM 207582.1|[46485772] gl|46488934|ref|NM\_207584.1|[46488934] gi|46488936|ref|NM\_207585.1|[46488936] gi|46592963|ref|NM\_207627.1|[46592963] gil46592970lrefINM 207628,1II465929701 gi|46592977|ref|NM\_207629.1|[46592977] gi|46592983|ref|NM\_207630.1|[46592983] gi|46518521|ref|NM\_207644.1|[46518521] g||46559746|ref|NM\_207645.1|[46559746] gi|46518523|ref|NM\_207646.1|[46518523] gi|46518525|ref|NM\_207647.1|[46518525] gi|50541970|ref|NM\_207660.2|[50541970] gi|50541969|ref|NM\_207661.2|[50541969] gi|50541966|ref|NM\_207662.2|[50541966] gi|46592999|ref|NM\_207672.1|[46592999] gi|47078226|ref|NM\_212460.1|[47078226] gi|47132574|ref|NM\_212461.1|[47132574] gi|47078244|ref|NM\_212464.1|[47078244] gi|47078246|ref|NM\_212465.1|[47078246] gi|47078248|ref|NM\_212467.1|[47078248] gil47078277|ref|NM 212469.1|[47078277] gil47132580|ref|NM 212471.1|[47132580] gij47132582jrefINM 212472.1j[47132582] gi|47132548|ref|NM 212474.1|[47132548] gi|47132550|ref|NM 212475.1|[47132550] gi|47132552|ref|NM 212476.1|[47132552] gi|47132554|ref|NM\_212478.1|[47132554] gi|47078242|ref|NM\_212479.1|[47078242] gil47078223lrefINM 212481.1lf470782231 gil47132556|ref|NM 212482.1|[47132556] gil47078237lrefINM 212492.11[47078237]

gi|47078230|ref|NM\_212502.1|[47078230] gi|47078232|ref|NM\_212503.1|[47078232] gi|47078254|ref|NM\_212530.1|[47078254]

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gil47078217IrefINM 212533.1I[47078217] gil47157321|ref|NM\_212535,1|[47157321] gil47157324|ref|NM 212539,1|[47157324] gil47078263|refINM\_212540.1|[47078263] gil47078257|refINM\_212543,1|[47078257] gil47086494|refINM 212550.1|[47086494] gil51036605|refINM 212551,2|[51036605] gij47086484|ref|NM 212552.1|[47086484] gi|47086474|ref|NM 212553.1|[47086474] gi|47086468|ref|NM 212554.1|[47086468] gi|47086458|ref|NM\_212555.1|[47086458] gi|47086442|ref|NM\_212556.1|[47086442 gi|47086438|ref|NM\_212557.1|[47086438] gi|47086434|ref|NM\_212558.1|[47086434] gi|47086426|ref|NM\_212559.1|[47086426] gil47132590|ref|NM 213560.1|[47132590] gi|47132599|ref|NM 213566,1|[47132599] gi|47080102|ref|NM 213568.1|[47080102] gij47087156|ref|NM 213569.1|[47087156] gi|47132518|ref|NM 213589.1|[47132518] gi|47132523|ref|NM 213590.1|[47132523] gl|47132602|ref|NM\_213593,1|[47132602] gi|47132526|ref|NM\_213594.1|[47132526] gi|47106056|ref|NM\_213596.1|[47106056] ail47106060|ref|NM\_213597.1|[47106060] gl|47106062|ref|NM\_213598.1|[47106062] gil47106047lrefINM 213599.1I[47106047] gli47106064|refINM\_213600,1|[47106064] gil47106066|refINM\_213601.1|[47106066] gil47106068|refINM\_213602,1|[47106068] gi|47106070|ref|NM 213603.1|[47106070] gi|47106072|ref|NM 213604.1|[47106072] gi|47106074|ref|NM 213605.1|[47106074] gl|47106049|ref|NM\_213606.1|[47106049] gi|47106051|ref|NM\_213607.1|[47106051] gi|47106053|ref|NM\_213608.1|[47106053] gi|50962798|ref|NM\_213609.2|[50962798] gi|47132594|ref|NM\_213611.1|[47132594] gil47132596|ref|NM 213612.1|[47132596] gil47132598|ref|NM 213613.2|[47132598] gi|47132531|ref|NM\_213618.1|[47132531] gi|47717099|ref|NM\_213619.1|[47717099] gi|47717101|ref|NM 213620.1|[47717101] gi|47519840|ref|NM 213621.1|[47519840] gi|47132533|ref|NM 213622.1|[47132533] gi|47578110|ref|NM 213631.1|[47578110] gi|47578112|ref|NM 213632.1|[47578112] gi|47419899|ref|NM\_213633.1|[47419899] gi|47157327|ref|NM\_213636.1|[47157327] gi|47419917|ref|NM\_213645.1|[47419917] gi|47419919|ref|NM\_213646.1|[47419919] gi|47524174|ref|NM\_213647.1|[47524174] gi|47419937|ref|NM\_213648.1|[47419937] gil47458810|ref|NM 213649.1|[47458810] gi|47458808|ref|NM\_213650.1|[47458808] gi|47458040|ref|NM\_213651.1|[47458040] gi|47458049|ref|NM\_213652.1|[47458049]

WC05044981 [file:///E:/WC05044981.apc]

gi|47458047|ref|NM\_213653.1|[47458047] qi|47458042|ref|NM 213654.1|[47458042] gij47458035|ref|NM 213655.1|[47458035] gi|47458038|ref|NM\_213656.1|[47458038] gi|47717091|ref|NM 213657.1|[47717091] gi|47717093|ref|NM\_213658.1|[47717093] gi|47458819|ref|NM\_213662.1|[47458819] gi|47519615|ref|NM\_213674.1|[47519615] gi|47497975|ref|NM\_213720.1|[47497975] gi|47523379|ref|NM\_213723.1|[47523379] gi|47523373|ref|NM\_213724.1|[47523373] gi|47524166|ref|NM\_213725.1|[47524166] gi|47523377|ref|NM\_213726.1|[47523377] gi|47551355|ref|NM\_214461.1|[47551355] ail47551353|ref|NM 214462.1|[47551353] gi|47607494|ref|NM 214675.1|[47607494] gi|47607496|ref|NM\_214676.1|[47607496 gi|47607498|ref|NM\_214677.1|[47607498] gi|47607500|ref|NM\_214678.1|[47607500] gi|47607502|ref|NM\_214679.1|[47607502] gi|47551346|ref|NM\_214710.1|[47551346] gi|47551348|ref|NM\_214711.1|[47551348] gil14728171|ref|XM 001279,4|[14728171] gil15294418|reflXM 001290.5|[15294418] gil14720227lreflXM 001296.4l[14720227] gi|14720376|ref|XM\_001322.2|[14720376] gi|14721336|ref|XM 001393.2|[14721336] glj18546180jreflXM 001442.4[[18546180] gi|14742707|ref|XM 001463.2|[14742707] gi|14726320|ref|XM\_001527.4|[14726320] gi|14726884|ref|XM\_001541.3|[14726884] gi|14734600|ref|XM\_001607.2|[14734600] gij14725410|ref|XM\_001644.4|[14725410] gij14729031|ref|XM\_001654.4|[14729031] gil14729023lrefiXM 001655.4l[14729023] gil29727539|ref|XM\_001677.3|[29727539] gil14735909lrefiXM 001690.4l[14735909] gil41204894|ref|XM 007651,13|[41204894] gi|37546668|ref|XM 010658.8|[37546668] gi|42659898|ref|XM\_012219.7|[42659898 gl|42656511|ref|XM\_015334.6|[42656511] gi|42655785|ref|XM\_015717.7|[42655785] gij42659340|ref|XM\_016093.7|[42659340] gij37539642|ref|XM\_016113.3|[37539642] gi|42657382|ref|XM\_016532.6|[42657382] gi|37546615|ref|XM\_016548.4|[37546615] gi|42660439|ref|XM\_016713.5|[42660439] gi|42656229|ref|XM\_017374.8|[42656229] gil37540277|reflXM 017661.3|[37540277] gil42656981|reflXM 017966.10|[42656981] gi|42660185|ref|XM 018399.7|[42660185] qi|42660716|ref|XM 018432.5|[42660716] gi|42662446|ref|XM 018487.5|[42662446] gi|42660088|ref|XM\_027045.11|[42660088] gi|41196212|ref|XM\_027074.6|[41196212] gi|42662509|ref|XM\_027105.4|[42662509]

gi|42655789|ref|XM\_027162.3|[42655789]

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gi142660312|ref|XM 027236,4|[42660312] gi [41203734|ref|XM 027237.7|[41203734] gil 18562991|ref|XM 027307.2|[18562991] gi[42660315]ref[XM 027330.13][42660315] gi | 42657548|ref|XM 027658.7|[42657548] gi | 42661856|ref|XM 028067.7|[42661856] gi 42656936 ref XM 028217.3 [42656936] gi[37552100|ref|XM\_028253.3|[37552100] gi | 41146627 | ref|XM 028413.7 | [41146627] gi | 42660130|ref|XM\_028522.5|[42660130] gi142662215|ref|XM 028810.6|[42662215] gi129742588|ref|XM 029084,5||29742588| gi142657171|ref|XM 029101.8|[42657171] gi141194246|ref|XM 029323,4|[41194246] gi141203774|ref|XM 029353.3|[41203774] gi142661384|ref|XM 029429.7|[42661384] gi 42661064 ref|XM\_029438.6 [42661064] gi142660024|ref|XM 029805.10|[42660024] gi[41057799|ref|XM\_029962.4|[41057799] gi[41146958]ref[XM\_030300.6][41146958] gil42661610lreflXM 030378,4l[42661610] gi142659359irefiXM 030445,7i[42659359] gi142662233irefiXM 030559.4[[42662233] gil42662234|reflXM 030577,8|[42662234] gil41058288|ref|XM 030665,4|[41058288] gil42656830|ref|XM 030669.9|[42656830] gil41149078|ref|XM 030729.5|[41149078] gil42661688|ref|XM 030892.4|[42661688] gij37552114|ref|XM 030893.3|[37552114] gi|27485351|ref|XM\_030896.3|[27485351] gi|42661697|ref|XM\_030958.8|[42661697] gi|42656397|ref|XM\_031009.7|[42656397] gil42660307lreflXM 031102.4l[42660307] gi|42660309|ref|XM\_031104.7|[42660309] gi 142656653 | reflXM 031246.10 | [42656653] gi[14758391|ref|XM\_031342.1|[14758391] gil42661350lreflXM 031357.6l[42661350] gij41107703|refiXM 031401.7|[41107703] gij37550558|ref|XM 031553.8|[37550558] gil41150031|ref|XM 031561.7|[41150031] gi 37540832|ref|XM 031689.7|[37540832] gi |41150034|ref|XM\_031706.8|[41150034] gi|41204883|ref|XM\_031744.5|[41204883] gi|42659366|ref|XM\_031975.7|[42659366] gi|41208847|ref|XM\_032059.3|[41208847] gi|22056189|ref|XM\_032181.3|[22056189] gil42661621|reflXM\_032278.10|[42661621] gi142655755|ref|XM 032397.4|[42655755] gil42656433|reflXM 032542,5|[42656433] gil42657389|ref|XM 032571.5|[42657389] gil42661979|ref|XM 032678.7|[42661979] gi|37541812|ref|XM 032693.2|[37541812] gi|42661970|ref|XM 032812.4|[42661970] gi|41144879|ref|XM 032901.7|[41144879] gi|41209336|ref|XM\_032945.5|[41209336] gi|42662389|ref|XM\_032996.5|[42662389] gil41151370|refiXM\_032997.5|[41151370]

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gil42660736[ref]XM 370944.2[[42660736] gi|42660744|ref|XM 370946.2|[42660744] gi|41206115|ref|XM 370947.1|[41206115] gi|41206124|ref|XM\_370948.1|[41206124] gi|41206126|ref|XM 370949.1|[41206126] gi|41206138|ref|XM 370952.1|[41206138] gi|42660928|ref|XM\_370958.2|[42660928] gi|41150395|ref|XM\_370959.1|[41150395] gi|41150405|ref|XM\_370965.1|[41150405] gli41150409lreflXM 370966.1[[41150409] gil42660967lreflXM 370967,2lf42660967 gil42660969lreffXM 370968.2lf426609691 gil41150429lreflXM 370972.1[41150429] gil41150431]reflXM 370973.1[[41150431] gil41150435|reflXM 370974.1|[41150435] gil41150439|reflXM 370975.1|[41150439] gi|41150522|ref|XM\_370977.1|[41150522] gl|42660995|ref|XM\_370980.2|[42660995] gi|41150483|ref|XM\_370981.1|[41150483] gl|42660766|ref|XM\_370982.2|[42660766] gl|42660794|ref|XM\_370984.2|[42660794] gl|41206439|ref|XM\_370986.1|[41206439] gil41206445|reflXM 370987.1|[41206445] gli41150359|reflXM 370988.1|[41150359] gil41150375[ref[XM 370991.1][41150375] gil41150377[ref]XM 370992.1[[41150377] gli41150379|ref|XM 370993.1|[41150379] gi|42660825|ref|XM\_370995.2|[42660825] gi|41150297|ref|XM\_370997.1|[41150297] gi|41150588|ref|XM\_371001.1|[41150588] gi|41150601|ref|XM\_371006.1|[41150601] gi|42661076|ref|XM\_371008.2|[42661076] gi[42661079[ref]XM\_371009.2][42661079] gil41150616irefiXM 371010.1l[41150616] gi|41150622|ref|XM\_371012.1|[41150622] gil41150630irefiXM 371013.1[f41150630] gil41150634|ref|XM 371014.1|[41150634] gil42661096|reflXM 371015.2|[42661096] gil42661099|ref|XM 371016.2|[42661099] gi|41150642|ref|XM\_371017.1|[41150642] gi|41150645|ref|XM\_371018.1|[41150645] gl|42661109|ref|XM\_371019.2|[42661109] gi|42661114|ref|XM\_371020.2|[42661114] gi|42661122|ref|XM\_371023.2|[42661122] gi[42661128]ref[XM\_371024.2][42661128] gi|41150788|ref|XM\_371026.1[[41150788] gi|41150794|ref|XM\_371028.1|[41150794] gi|41150802|ref|XM\_371032.1|[41150802] gi|41150718|ref|XM\_371034.1|[41150718] gi|42661245|ref|XM\_371035.2|[42661245] gil41150726[ref]XM 371036.1[[41150726] gi|42661257|ref|XM 371039.2|[42661257] gi|42661302|ref|XM 371043.2|[42661302] gi|42661304|ref|XM\_371046.2|[42661304] gi|42661141|ref|XM\_371052.2|[42661141]

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gi|42662482|ref|XM\_371470.2|[42662482] gil42662483lreflXM 371471.2l[42662483] gi|41151474|ref|XM\_371474.1|[41151474] gi|41118879|ref|XM\_371476.1|[41118879] gi|41117712|ref|XM 371477.1|[41117712] gi|42656191|ref|XM\_371478.2|[42656191] gi|42656197|ref|XM 371479.2|[42656197] gi|41123791|ref|XM 371480.1|[41123791] gi|42656264|ref|XM 371481.2|[42656264] gi|42656268|ref|XM\_371484.2|[42656268] gi|41123830|ref|XM\_371485.1|[41123830] gi|42656276|ref|XM\_371486.2|[42656276] gi|42656278|ref|XM\_371487.2|[42656278] gi|42656280|ref|XM\_371488.2|[42656280] gil41190376|ref|XM 371489.1|[41190376] gi|41190388|ref|XM\_371490.1|[41190388] gi|41190397|ref|XM 371491.1|[41190397] gij41190406|ref|XM 371492.1|[41190406] ail41190411|ref|XM\_371493.1|[41190411] gij41190413jrefjXM\_371494.1j[41190413] gij41190434|ref|XM\_371495.1|[41190434] gi|42656319|ref|XM\_371496.2|[42656319] gi|42656331|ref|XM\_371497.2|[42656331] gi|41190460|ref|XM\_371500.1|[41190460] gil42656340|ref|XM 371501,2|[42656340] gil42656341|refiXM\_371502,2|[42656341] ail41190469lrefiXM 371503.1[[41190469] gil41190474|ref|XM 371504,1|[41190474] glj42656347jrefiXM 371505,2l[42656347] gi|42656348|ref|XM\_371506.2|[42656348] g||42656355|ref|XM 371511.2|[42656355] gi|41190499|ref|XM\_371513.1|[41190499] g||41190501|ref|XM 371514.1||41190501] g||42656357|ref|XM\_371515.2|[42656357] gil41190507lreflXM 371517.1lf411905071 gil42656413lreflXM 371534,2lf426564131 gli42656382|reflXM\_371535,2|[42656382] gi|42656384|ref|XM\_371536.2|[42656384] gi|41124491|ref|XM 371537.1|[41124491] gil41124501|ref|XM 371539.1|[41124501] gl|41190797|ref|XM 371540,1|[41190797] gi|42656219|ref|XM\_371542.2|[42656219] gi|42656232|ref|XM\_371543.2|[42656232] gi|42656236|ref|XM\_371544.2|[42656236] gi|42656248|ref|XM 371546.2|[42656248] gi|42656249|ref|XM\_371547.2|[42656249] gi|41118730|ref|XM\_371552.1|[41118730] gil41126360|ref|XM\_371555.1|[41126360] gil42656430|ref|XM 371558,2|[42656430] gil41125704|ref|XM 371561.1|[41125704] gil41125714|ref|XM 371564.1|[41125714] gil41125731|ref|XM 371567,1|[41125731] gil42656435|ref|XM 371568.2|[42656435] gi|42656436|ref|XM 371569.2|[42656436] gi|42656439|ref|XM 371571.2|[42656439] gi|41125761|ref|XM\_371572.1|[41125761] gi|42656448|ref|XM\_371573.2|[42656448]

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gi|42656520|ref|XM\_371575.2|[42656520] gi|42656521|ref|XM\_371576.2|[42656521] gi|42656526|ref|XM\_371577.2|[42656526] gi|41134014|ref|XM\_371581.1|[41134014] gi|41191407|ref|XM\_371583.1|[41191407] gi|41191413|ref|XM\_371584.1|[41191413] gi|41191422|ref|XM 371585,1|[41191422] gi|42656546|ref|XM 371586,2|[42656546] gi|41191437|ref|XM 371588.1|[41191437] gil42656560[ref[XM\_371590.2][42656560] gi|41191456|ref|XM\_371591.1|[41191456] gi|42656566|ref|XM\_371592.2|[42656566] ail41191468|ref|XM\_371593.1|[41191468] ail42656577|ref|XM\_371594.2|[42656577] gi|42656585|ref|XM\_371595.2|[42656585] gil41191497|ref|XM\_371600.1|[41191497] gil41126904|ref|XM\_371603.1|[41126904] gl|42656485|ref|XM 371604.2|[42656485] gi|41126925|ref|XM\_371605.1|[41126925] gi|42656611|ref|XM\_371606.2|[42656611] gi|41144256|ref|XM 371614,1|[41144256] gl|42656679|ref|XM 371617.2|[42656679] gi|41144279|ref|XM\_371618.1|[41144279] gi|41144284|ref|XM\_371619.1|[41144284] gi|41144299|ref|XM\_371621.1|[41144299] g||41144319|ref|XM\_371622.1|[41144319] g||41144322|ref|XM\_371623.1|[41144322] gi|41144347|ref|XM\_371625.1|[41144347] gi|41144350|ref|XM\_371626.1|[41144350] gl|41144364|ref|XM\_371629.1|[41144364] gli42656714|ref|XM 371630,2|[42656714] gi|41193238|ref|XM 371631.1|[41193238] gi|42656723|ref|XM 371632.2|[42656723] gl|41193259|ref|XM 371638,1|[41193259] gi|41193262|ref|XM 371639.1|[41193262] gi|41193266|ref|XM 371641.1|[41193266] gi|41193278|ref|XM\_371643.1|[41193278] g||41193286|ref|XM\_371645.1|[41193286] gl|41137106|ref|XM\_371647.1|[41137106] gi|42656643|ref|XM\_371649.2|[42656643] gi|41137141|ref|XM 371653.1|[41137141] gi|41146519|ref|XM 371655.1|[41146519] gi|41146521|ref|XM 371656.1|[41146521] gi|41146530|ref|XM 371658.1|[41146530] g||42656808|ref|XM 371660.2|[42656808] g||41146558|ref|XM 371662.1|[41146558] gi|42656821|ref|XM\_371663.2|[42656821] gi|42656822|ref|XM 371664.2|[42656822] gi|41146581|ref|XM\_371665.1|[41146581] gi|42656845|ref|XM\_371666.2|[42656845]

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gi|41146994|ref|XM\_371776.1|[41146994] gil42657191|reflXM 371777,2|[42657191] gi|41146936|ref|XM\_371778.1|[41146936] gi|42657203|ref|XM\_371781.2|[42657203] gil41146952|reflXM 371782,1|[41146952] gi|41146954|ref|XM\_371783.1|[41146954] gi|41147230|ref|XM 371790.1|[41147230] gi|41147233|ref|XM 371791,1|[41147233] gi|42657416|ref|XM\_371793.2|[42657416] gi|41147306|ref|XM 371796.1|[41147306] gi|41147308|ref|XM 371797.1|[41147308] gi|42657574|ref|XM 371798.2|[42657574] gi|42657579|ref|XM\_371801.2|[42657579] gi|42657617|ref|XM\_371809.2|[42657617] gi|41197088|ref|XM\_371812.1|[41197088] gi|41197093|ref|XM\_371813.1|[41197093] gi|41197097|ref|XM\_371814.1|[41197097] gl|41197099|ref|XM\_371815.1|[41197099] gl|42657635|ref|XM\_371816.2|[42657635] gil41197105|refiXM 371817.1|[41197105] gil41197107|refiXM\_371818.1|[41197107] gil41197110|ref|XM 371819.1|[41197110] gi|42657643|ref|XM\_371820.2|[42657643] gi|42657651|ref|XM\_371822.2|[42657651] gi|41197139|ref|XM\_371823.1|[41197139] gi|42657659|ref|XM\_371824.2|[42657659] g||41197144|ref|XM\_371825.1|[41197144] gi|41197153|ref|XM\_371826.1|[41197153] gi|41147317|ref|XM\_371829.1|[41147317] gi|41147326|ref|XM\_371832.1|[41147326] gi|41147336|ref|XM\_371835.1|[41147336] gl|42657436|ref|XM\_371837.2|[42657436] gi|42657437|ref|XM\_371838.2|[42657437] gi|41147275|ref|XM 371841.1|[41147275] gi|41147279|ref|XM\_371842.1|[41147279] gi|41196188|ref|XM\_371843.1|[41196188] gi[42657450|ref|XM\_371844.2|[42657450] gi|41196203|ref|XM\_371845.1|[41196203] gl|41196206|ref|XM\_371846.1|[41196206] gi|42657457|ref|XM\_371847.2|[42657457] gi|42657473|ref|XM\_371848.2|[42657473] gi|41196223|ref|XM\_371849.1|[41196223] gil41196228IreflXM 371850.1[41196228] gil41196231[reflXM 371851.1][41196231] gil42657492|ref|XM 371853.2|[42657492] gij41147367[ref]XM\_371856.1[[41147367] gi|42657549|ref|XM\_371857.2|[42657549] gi|42657552|ref|XM\_371858.2|[42657552] gi|41147427|ref|XM\_371863.1|[41147427] gi|42657931|ref|XM\_371873.2|[42657931] gi|41222034|ref|XM\_371874.1|[41222034] gi|42657848|ref|XM\_371877.2|[42657848] gi|42657850|ref|XM\_371878.2|[42657850] gi|41222049|ref|XM\_371879.1|[41222049] gil42657859|ref|XM 371884.2|[42657859] gil41222071[ref]XM 371885.1][41222071] gi|41222092|ref|XM 371889.1|[41222092] WC05044981 [file:///E:/WC05044981.opc]

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gi|42662766|ref|XM\_372181.2|[42662766] gi|42662767|ref|XM\_372182.2|[42662767] gi|41151802|ref|XM 372186,1|[41151802] gi|41151807|ref|XM 372190.1|[41151807] gi|41151809|ref|XM 372191.1|[41151809] gi|42662777|ref|XM 372192.2|[42662777] gi|42662781|ref|XM\_372193.2|[42662781] gi|41151823|ref|XM\_372194.1|[41151823] gi|42662789|ref|XM\_372195.2|[42662789] gi|42662654|ref|XM\_372197.2|[42662654] gi|41151590|ref|XM 372198.1|[41151590] gi|42662660|ref|XM 372199,2|[42662660] gi|42662667|ref|XM 372200,2|[42662667] gi|42662672|ref|XM\_372201.2|[42662672] gi|41151727|ref|XM 372202,1|[41151727] gi|41210566|ref|XM 372203.1|[41210566] gi|42662536|ref|XM\_372204.2|[42662536] gi|42662545|ref|XM\_372205.2|[42662545] gi|41151494|ref|XM\_372208.1|[41151494] gli41151496|ref|XM\_372209.1|[41151496] gi|41151498|ref|XM\_372210.1|[41151498] gi|41151500|ref|XM\_372212.1|[41151500] gi|42662553|ref|XM\_372213.2|[42662553] gi|41151526|ref|XM\_372214.1|[41151526] gl|42662555|ref|XM 372223,2|[42662555] gi|42662556|ref|XM 372224,2|[42662556] gi|41151518|ref|XM 372226.1|[41151518] gi|42662617|ref|XM\_372227.2|[42662617] gi|42662627|ref|XM\_372231.2|[42662627] gi|42662629|ref|XM\_372233.2|[42662629] gi|42662605|ref|XM\_372239.2|[42662605] gi|41151689|ref|XM\_372245.1|[41151689] gi|41151626|ref|XM\_372247.1|[41151626] gi|42662681|ref|XM\_372248.2|[42662681] gi|41151634|ref|XM\_372253.1|[41151634] gl|41151637|ref|XM\_372254.1|[41151637] ail41151641|ref|XM\_372255.1|[41151641] gi|42662690|ref|XM 372257.2|[42662690] gi|41151663|ref|XM 372258.1|[41151663] gi|41151575|ref|XM\_372261.1|[41151575] gil42662640|ref|XM\_372262.2|[42662640] gi|42662645|ref|XM\_372267.2|[42662645] gi|41151674|ref|XM\_372268.1|[41151674] gl|41151701|ref|XM\_372272.1|[41151701] gi|42662719|ref|XM\_372273.2|[42662719] gi|41151707|ref|XM\_372274.1|[41151707] gi|41151715|ref|XM\_372275.1|[41151715] gi|42662734|ref|XM\_372282.2|[42662734] gi|42662736|ref|XM\_372286.2|[42662736] gi|42662741|ref|XM 372289,2|[42662741] gi|42662744|ref|XM 372292,2|[42662744]

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gi|42660323|ref|XM 372528.2|[42660323] gi|41203916|ref|XM 372532.1|[41203916] gi|41203921|ref|XM\_372534.1|[41203921] gi|41203924|ref|XM\_372535.1|[41203924] gi|41203926|ref|XM\_372536.1|[41203926] gi|41150127|ref|XM\_372542.1|[41150127] gi|41150129|ref|XM\_372543.1|[41150129] gi|41150131|ref|XM 372544.1|[41150131] gi|41150137|ref|XM 372547.1|[41150137] gi|41150147|ref|XM 372548.1|[41150147] gi|41150149|ref|XM 372549,1|[41150149] gi|41150151|ref|XM\_372550.1|[41150151] gi|41150072|ref|XM\_372553.1|[41150072] gl|41150076|ref|XM 372555,1|[41150076] gi|41150064|ref|XM 372556.1|[41150064] ail41205014|ref|XM\_372559.1|[41205014] gi|42660407|ref|XM 372560.2|[42660407] gil41205021lreflXM\_372562.1l[41205021] gi|41205026|ref|XM\_372563.1|[41205026] gi|41205033|ref|XM\_372565.1|[41205033] gi|41205035|ref|XM\_372566.1|[41205035] gi|42660537|ref|XM\_372568.2|[42660537] gil41205042lreflXM 372569.1l[41205042] gil41205044|ref|XM 372570.1|[41205044] gij41205051 refiXM 372573, 1 [41205051] gij42660472|ref|XM 372574.2|[42660472] gij41205056|ref|XM\_372575.1|[41205056] g||41205058|ref|XM\_372576.1||41205058| gi|41205061|ref|XM\_372577.1|[41205061] gi|42660492|ref|XM\_372578.2|[42660492] gi|42660494|ref|XM\_372579.2|[42660494] g||42660499|ref|XM\_372580.2|[42660499] gil42660509|reflXM\_372581,2|[42660509] gil41205075|reflXM 372583.1|[41205075] gil42660513|reflXM 372584.2|[42660513] gi|41205080|ref|XM 372585.1|[41205080] gi|41150177|ref|XM 372586.1|[41150177 gl|41205627|ref|XM 372588.1|[41205627] gi|41205629|ref|XM 372589.1|[41205629] gi|41205631|ref|XM 372591.1|[41205631] gi|42660598|ref|XM\_372592.2|[42660598] gi|41150092|ref|XM\_372593.1|[41150092] gll41150098lreflXM 372596.1l[41150098] gi|41150100|ref|XM\_372597.1|[41150100] gil41150102lreflXM 372598.1l[41150102] gi|41150104|ref|XM\_372599.1|[41150104] gil41150209lreflXM 372601.1[f41150209] gi|42661004|ref|XM 372606,2|[42661004] gi|41150516|ref|XM 372607.1|[41150516] gi|41150518|ref|XM 372608.1|[41150518] gi|41150520|ref|XM\_372609.1|[41150520] gi|41206146|ref|XM\_372611.1|[41206146] gi|41206154|ref|XM\_372614.1|[41206154] gi|42660740|ref|XM\_372615.2|[42660740] gi|41150449|ref|XM\_372616.1|[41150449] gi|41150451|ref|XM 372617,1|[41150451] gi|41150453|ref|XM 372618.1|[41150453]

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gi|41150858|ref|XM\_373769.1|[41150858] gil41150866|ref|XM 373770,1|[41150866] gi|41150868|ref|XM\_373771.1|[41150868] gi|41150876|ref|XM 373772.1|[41150876] gi|41150880|ref|XM 373773,1|[41150880] gi|41150893|ref|XM 373774.1|[41150893] gi|41150896|ref|XM 373775.1|[41150896] gi|41207716|ref|XM\_373776.1|[41207716] gi|41150940|ref|XM 373778,1|[41150940] gi|41150944|ref|XM\_373779,1|[41150944] gi|41150946|ref|XM\_373780.1|[41150946] gi|41150932|ref|XM\_373782.1|[41150932] gi|41150914|ref|XM 373783,1|[41150914] gi|41150916|ref|XM 373784.1|[41150916] gi|42661839|ref|XM 373785,2|[42661839] gi|41151028|ref|XM 373786.1|[41151028] ail41151030|ref|XM\_373787.1|[41151030] gl|42661867|ref|XM 373788.2|[42661867] gl|41151044|ref|XM\_373789.1|[41151044] gi|41151047|ref|XM\_373790.1|[41151047] gi|41151194|ref|XM\_373792.1|[41151194] gi|41151072|ref|XM\_373793.1|[41151072] gi|41151108|ref|XM\_373795.1|[41151108] gi|41151115|ref|XM\_373796.1|[41151115] gi|41151121|ref|XM\_373797.1|[41151121] gl|42662022|ref|XM\_373798.2|[42662022] gl|41150958|ref|XM 373799,1|[41150958] gi|41150960|ref|XM\_373800.1|[41150960] gi|41150962|ref|XM 373801.1|[41150962] gi|41150964|ref|XM\_373802,1|[41150964] gl|41150981|ref|XM\_373803.1|[41150981] gi|42661623|ref|XM\_373804.2|[42661623] gil42661631lreflXM 373805,2l[42661631] gil41208726|ref|XM 373808.1|[41208726] gi|41208747|ref|XM 373809.1|[41208747] ali42661669|ref|XM\_373810.2|[42661669] gi|41208825|ref|XM 373811.1|[41208825] gi|41208862|ref|XM\_373812,1|[41208862] gi|41114913|ref|XM\_373814.1|[41114913] gil41114916|ref|XM\_373815.1|[41114916] gi|41114967|ref|XM\_373817.1|[41114967] gil41115071|reflXM\_373818.1|[41115071] gi|41107715|ref|XM 373820,1|[41107715] gi|42655847|ref|XM 373821,2|[42655847] gi|41107705|ref|XM 373822,1|[41107705] gi|41107707|ref|XM 373823,1|[41107707] gi|41109282|ref|XM 373824.1|[41109282] gi|41058214|ref|XM 373825,1|[41058214] ai|41058232|ref|XM\_373826.1|[41058232] gi|42656066|ref|XM\_373827.2|[42656066] gi|41111276|ref|XM\_373828.1|[41111276] gi|41188259|ref|XM\_373831.1|[41188259] gil41107683lreflXM 373832.1lf411076831 gi|41107691|ref|XM 373833,1|[41107691] gi|41109026|ref|XM 373835.1|[41109026] gi|41109030|ref|XM 373836,1|[41109030]

gi|41109033|ref|XM\_373837.1|[41109033]

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9i|41190399|ref|XM 373984,1|[41190399]

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gil42656849|ref|XM 374060.2|[42656849]

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gi|42659730|ref|XM\_374909.1|[42659730] gi|42659734|ref|XM\_374911.1|[42659734] gi|42659736|ref|XM\_374912.1|[42659736] gi|42659745|ref|XM\_374915.1|[42659745] gi|42659773|ref|XM\_374917.1|[42659773] gi|42659775|ref|XM\_374919.1|[42659775] gi|42659777|ref|XM\_374920.1|[42659777] gi|42659779|ref|XM\_374922.1|[42659779] gi|42659577|ref|XM\_374927.1|[42659577] gi|42659584|ref|XM\_374930.1|[42659584] gi|42659588|ref|XM\_374932.1|[42659588] gi[42659592|ref|XM\_374933.1|[42659592] gi|42659603|ref|XM\_374936.1|[42659603] gi|42659610|ref|XM\_374937.1|[42659610] gi|42659624|ref|XM\_374944.1|[42659624] gi|42659626|ref|XM\_374945.1|[42659626] gi|42659634|ref|XM\_374948.1|[42659634] gi|42659638|ref|XM\_374949.1|[42659638] gi|42660082|ref|XM\_374952.1|[42660082] gi|42660008|ref|XM\_374959.1|[42660008] gii42660022|ref|XM\_374965.1|[42660022] gli42660028|ref|XM\_374967.1|[42660028] gl|42659922|ref|XM\_374972.1|[42659922] gi|42659925|ref|XM\_374973.1|[42659925] gl|42659942|ref|XM\_374976.1|[42659942] gi|42659951|ref|XM\_374981.1|[42659951] gi|42659953|ref|XM\_374982.1|[42659953] gi|42659959|ref|XM\_374983.1|[42659959] gli42659962|reflXM 374985.1|[42659962] gli42659887|ref|XM\_374987.1|[42659887] gi|42659890|ref|XM\_374989.1|[42659890] gl|42659907|ref|XM\_374995.1|[42659907] gl|42659911|ref|XM\_374996.1|[42659911] gi|42660086|ref|XM\_374997.1|[42660086] g||42660094|ref|XM\_374999.1|[42660094] gi|42660098|ref|XM\_375000.1|[42660098] gl|42660046|ref|XM\_375004.1|[42660046] gl|42660048|ref|XM\_375005.1|[42660048] gl|42660132|ref|XM\_375007.1|[42660132] gi|42660146|ref|XM\_375013.1|[42660146] gl|42660159|ref|XM\_375018.1|[42660159] gl|42660175|ref|XM\_375023.1|[42660175] gi|42660186|ref|XM\_375027.1|[42660186] gi|42660191|ref|XM\_375029.1|[42660191] gi|42660196|ref|XM\_375031.1|[42660196] gi|42660198|ref|XM\_375032.1|[42660198] gi|42660112|ref|XM\_375033.1|[42660112] gi|42660120|ref|XM\_375035.1|[42660120] gi|42660213|ref|XM\_375038.1|[42660213] gil42660219[ref|XM\_375039.1][42660219] gi|42660228|ref|XM\_375041.1|[42660228] gi|42660230|ref|XM\_375042.1|[42660230] gi|42660234|ref|XM\_375045.1|[42660234] gi|42660238|ref|XM\_375065.1|[42660238] gi|42660241|ref|XM\_375067.1|[42660241] gil42660252|ref|XM\_375074.1|[42660252] al|42660256|ref|XM\_375075.1|[42660256]

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gi|42659242|ref|XM 376902.1|[42659242] gi|42659248|ref|XM\_376903.1|[42659248] gil42659252lreflXM 376905.1lf426592521 gil42659258lreflXM 376909.1l[42659258] gil42659054|reflXM\_376917.1|[42659054] gil42659057lreflXM 376921.1lf426590571 gi|42658996|ref|XM\_376924.1|[42658996] gil42659039lreflXM 376925.1[[42659039] gi|42659048|ref|XM\_376930.1|[42659048] gi|42659050|ref|XM\_376931.1|[42659050] gi|42659123|ref|XM 376939.1|[42659123] gi|42659134|ref|XM 376947.1|[42659134] gi|42659138|ref|XM 376949.1|[42659138] gil42659140lreflXM 376950.1[f42659140] gil42662769lreflXM 376960.1lf426627691 gi|42662771|ref|XM\_376965.1|[42662771] gi|42662775|ref|XM\_376968.1|[42662775] gil42662712lreflXM 376978.1l[42662712] ail42662658lreflXM 376981.1l[42662658] gil42662730|ref|XM 376986.1|[42662730] gil42662539|ref|XM 376989.1|[42662539] gi|42662565|ref|XM 377000.1|[42662565] gl[42662567]ref[XM\_377002.1][42662567] gl[42662560]ref[XM\_377012.1][42662560] gil42662611lreflXM 377014.1lf426626111 gil42662619lreflXM 377018.1lf426626191 gil42662621lreflXM 377019.1l[42662621] gll42662576lreflXM 377024.1[42662576] gi|42662578|ref|XM\_377025.1|[42662578] gi|42662580|ref|XM\_377026.1|[42662580] gi|42662582|ref|XM\_377027.1|[42662582] gl|42662584|ref|XM 377028.1|[42662584] gi|42662591|ref|XM\_377031.1|[42662591] gi|42662593|ref|XM\_377032.1|[42662593] gi|42662598|ref|XM\_377033.1|[42662598] gl|42662602|ref|XM\_377034.1|[42662602] gi|42662678|ref|XM\_377041.1|[42662678] gil42662638|ref|XM 377053.1|[42662638] gil42662641lreflXM 377060.1[f42662641] gil42662643lreflXM 377062.1[42662643] gil42662704|ref|XM 377071.1|[42662704] gi|42662695|ref|XM\_377072.1|[42662695] gi|42662697|ref|XM\_377073.1|[42662697] gi|42662721|ref|XM\_377076.1|[42662721] gi|42662760|ref|XM\_377087.1|[42662760] gi|42662746|ref|XM\_377097.1|[42662746] gil42662748lreflXM 377098.1[[42662748] gil42662750lreflXM 377102.1[[42662750] gil42662752|ref|XM 377104.1|[42662752] gi|42659567|ref|XM\_377109.1|[42659567] gi|42659569|ref|XM 377110.1|[42659569] gi|42659412|ref|XM 377115.1|[42659412] gi|42659532|ref|XM\_377117.1|[42659532] gil42659536lreflXM 377122.1lf426595361 gil42659391lreflXM 377129.1l[42659391] gil42659435|ref|XM\_377133.1|[42659435] gil42659476|ref|XM 377136.1|[42659476]

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gi|20270432|ref|NG\_000970.1|[20270432] gij20128124|ref|NG\_000971.1|[20128124] gi|20128125|ref|NG\_000972.1|[20128125] gi|20270433|ref|NG\_000973.1|[20270433] gil20128126[refING 000974.1][20128126] gil20128127|ref|NG 000975.1|[20128127] gil28866967[refING 000977.2][28866967] gil20128129|refING 000978.1|[20128129] gil20128130|ref|NG 000979.1|[20128130] gi|28316813|ref|NG\_000980.2|[28316813] gi|20270434|ref|NG\_000981.1|[20270434] gi|20270435|ref|NG\_000982.1|[20270435] gi|20128132|ref|NG\_000983.1|[20128132] gi|20270436|ref|NG\_000984.1|[20270436] gi|20128133|ref|NG\_000986.1|[20128133] gl|20128466|ref|NG\_000987.1|[20128466] gi|20128134|ref|NG\_000988.1|[20128134] ali20270629|refING 000989.1|[20270629] gi|20128135|ref|NG\_000990.1|[20128135] gi|20128136|ref|NG\_000991.1|[20128136] gli20128137[ref]NG 000994.1[[20128137] gi|20270437|ref|NG 000995.1|[20270437] gi|20128138|ref|NG\_000996.1|[20128138] gl|20128139|ref|NG\_000997.1|[20128139] gli20128140lrefING 000999,1|[20128140] gi|20128141|ref|NG\_001000.1|[20128141] gl|20128142|ref|NG\_001001.1|[20128142] gl|20128143|ref|NG\_001002.1|[20128143] glj20270438|ref|NG\_001004.1|[20270438] gl|20270439|ref|NG\_001005.1|[20270439] g||20128144|ref|NG\_001006.1|[20128144] gi|20128145|ref|NG\_001007.1|[20128145] gli20270440irefING 001008.1|[20270440] gl[20270441]ref[NG\_001009.1][20270441] glj20128146|ref[NG\_001010.1|[20128146] gi|20128147|ref|NG\_001012.1|[20128147] gil20270442|ref|NG 001013.1|[20270442] gli21729868|refiNG 001014.1|[21729868] gil20270443|ref|NG\_001016.1|[20270443] gi|20128149|ref|NG\_001017.1|[20128149] gi|48927990|ref|NG\_001019.3|[48927990] gi|20128462|ref|NG\_001020.1|[20128462] gi|20128151|ref|NG\_001021.1|[20128151] gi|20128152|ref|NG\_001022.1|[20128152] gi|20128153|ref|NG\_001023.1|[20128153] gil20128154|refING 001024.1|[20128154] gil20128155[ref[NG 001025.1][20128155] gij20128156jref[NG\_001026.1][20128156] gij20128157|ref|NG\_001027.1|[20128157] gi|20128158|ref|NG 001028.1|[20128158] gi|20270444|ref|NG\_001029.1|[20270444] gi|20270445|ref|NG\_001030.1|[20270445] gi|20128461|ref|NG\_001031.1|[20128461] gij20128159|ref|NG\_001032.1|[20128159] gi|20270446|ref|NG\_001033.1|[20270446] gi|20128160|ref|NG 001035.1|[20128160] gi|20128161|ref|NG 001036.1|[20128161]

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gi|20270542|ref|NG\_001223.1|[20270542] gi|20270543|ref|NG\_001224,1|[20270543] gi|29789742|ref|NG\_001226.1|[29789742] gi|29789796|ref|NG\_001228.1|[29789796] gi|20270545|ref|NG\_001229.1|[20270545] gi|20270546|ref|NG\_001230.1|[20270546] gi|20270547|ref|NG\_001231.1|[20270547] gi|20270548|ref|NG\_001232.1|[20270548] gi|20270549|ref|NG\_001233.1|[20270549] gi|20270550|ref|NG\_001234.1|[20270550] gi|20270551|ref|NG\_001235.1|[20270551] gi|20270552|ref|NG\_001236.1|[20270552] gi|20270553|ref|NG\_001237.1|[20270553] gi|20270554|ref|NG\_001238.1|[20270554] gl|20270555|ref|NG\_001239.1|[20270555] gi|20270556|ref|NG\_001240.1|[20270556] g/|20270557|ref|NG\_001241.1|[20270557] gi|20270558|ref|NG\_001242.1|[20270558] all20270559iref[NG\_001243.1|[20270559] gi|20270560|ref|NG\_001244.1|[20270560] gi|29789744|ref|NG\_001245.1|[29789744] gl|20270561|ref|NG\_001246.1|[20270561] gf[20270562|ref[NG\_001247.1][20270562] gi|29789572|ref|NG\_001248.1|[29789572] gi|29789571|ref|NG\_001249.1|[29789571] gi|29789574|ref|NG\_001250.1|[29789574] gf|29789573|ref|NG\_001251.1|[29789573] gi|29789576|ref|NG\_001252.1|[29789576] gi|29789577|ref|NG\_001253.1|[29789577] gil29789580|ref|NG\_001254.1|[29789580] gi|29789579|ref|NG\_001255.1|[29789579] gi|29789581|ref|NG 001256,1|[29789581] gi|29789584|ref|NG\_001257.1|[29789584] gi|29789583|ref|NG\_001258.1|[29789583] gl|20270563|ref|NG\_001259.1|[20270563] gi|20270564|ref|NG\_001260.1|[20270564] gi|20270565|ref|NG\_001261.1|[20270565] g||20270566|ref|NG\_001262.1|[20270566] gi|20270567|ref|NG\_001263.1|[20270567] gi|20270568|ref|NG\_001264.1|[20270568] gil29789831|ref|NG\_001265.1|[29789831] gi|20270569|ref|NG\_001266.1|[20270569] gf[20270570|ref[NG\_001267.1][20270570] gl|20270571|ref|NG\_001268.1|[20270571] gi|29789833|ref|NG\_001269.1|[29789833] gi|29789835|ref|NG\_001270.1|[29789835] gi|20270572|ref|NG\_001271.1|[20270572] gi|20270573|ref|NG\_001272.1|[20270573] gi|20270574|ref|NG\_001273.1|[20270574] gi|20270575|ref|NG\_001274.1|[20270575] gi|20270576|ref|NG 001275.1|[20270576] gi|20270577|ref|NG\_001276.1|[20270577] gi|20270578|ref|NG\_001277,1|[20270578] gi|20270579|ref|NG 001278.1|[20270579] gi|20270581|ref|NG\_001279.1|[20270581] gi|20270582|ref|NG\_001280.1|[20270582] gi|20270583|ref|NG 001281.1|[20270583]

ail20270584|ref[NG 001282.1|[20270584] gi|29423722|ref|NG\_001286.2|[29423722] gi|20270580|ref|NG\_001287.1|[20270580] gi|20270589|ref|NG 001288.1|[20270589] gi|20270590|ref|NG 001289.1|[20270590] gi|29789599|ref|NG\_001290.1|[29789599] gl|29789585|ref|NG\_001291.1|[29789585] gi|29789588|ref|NG\_001292.1|[29789588] gi|20270591|ref|NG\_001293.1|[20270591] gi|20270592|ref|NG\_001294.1|[20270592] gi|20270593|ref|NG\_001295.1|[20270593] gil20270594|ref|NG\_001296.1|[20270594] gil20270595|ref|NG\_001297.1|[20270595] gi|20270596|ref|NG\_001298.1|[20270596] gi|20270597|ref|NG\_001299.1|[20270597] gli20270598|ref|NG\_001300.1|[20270598] gi|20270599|ref|NG 001301.1|[20270599] gi|29789542|ref|NG 001302.1|[29789542] gi|20270600|ref|NG 001303.1|[20270600] gl|20270601|ref|NG\_001305.1|[20270601] gi|20270602|ref|NG\_001306.1|[20270602] gl|20270603|ref|NG\_001307.1|[20270603] gi|20270604|ref|NG\_001308.1|[20270604] gi|20270605|ref|NG\_001309.1|[20270605] gi|20270606|ref|NG\_001311.1|[20270606 gl|20270608|ref|NG\_001313.1|[20270608] gi|29789694|ref|NG\_001314.1|[29789694] gi|20270609|ref|NG\_001315,1|[20270609] gi|20270610|ref|NG\_001316.1|[20270610] gl|20270611|ref|NG\_001317.1|[20270611] gl|20270612|ref|NG\_001318.1|[20270612] g||20270613|ref|NG\_001319.1|[20270613] gi|20270615|ref|NG\_001321.1|[20270615] gi|20270616|ref|NG 001322.1|[20270616] gi|20270617|ref|NG\_001323.1|[20270617] glj20270618|refING 001324,1|[20270618] gli20270619|ref|NG\_001325.1|[20270619] gi|20270620|ref|NG\_001326.1|[20270620] gi|20270622|ref|NG\_001328.1|[20270622] gl|20270623|ref|NG\_001329.1|[20270623] gl|20270624|ref|NG\_001330.1|[20270624] gl|20270625|ref|NG\_001331,1|[20270625] gil21363121|refING\_001332.1|[21363121] gl|21536269|ref|NG 001333.1|[21536269] gi|21463739|ref|NG\_001334.1|[21463739] gi|24586691|ref|NG\_001335.1|[24586691] gli28436398[ref]NG\_001336.2[[28436398] gi|22143966|ref|NG 001337.1|[22143966] gi|24046436|ref|NG 001526,1|[24046436] gi|24046437|ref|NG\_001528.1|[24046437] gl|24046438|ref|NG 001529.1|[24046438] gi|24046439|ref|NG\_001531.1|[24046439] gi|24046440|ref|NG\_001532.1|[24046440] gi|24046441|ref|NG 001533.1|[24046441] gi|24046442|ref|NG\_001534.1|[24046442] gi|24046443|ref|NG 001535.1|[24046443] gi|24046444|ref|NG\_001537.1|[24046444]

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gi|28976157|ref|NG\_002661.1|[28976157] gil32480621lrefING 002662.1lf324806211 gi|32480619|ref|NG\_002663.1|[32480619] gi|32480623|ref|NG\_002665.1|[32480623] gi|32480622|ref|NG 002666,1|[32480622] gi|31711995|ref|NG 002667,2|[31711995] gi|28976162|ref|NG 002668.1|[28976162] gi|28976158|ref|NG\_002669.1|[28976158] gi|45361708|ref|NG 002670.2|[45361708] gi|28976161|ref|NG\_002671.1|[28976161] gi|31711993|ref|NG\_002672.2|[31711993] gi|28976164|ref|NG\_002673.1|[28976164] gl|32480624|ref|NG\_002674.1|[32480624] gi|32480625|ref|NG\_002675.1|[32480625] gi|32480629|ref|NG 002676,1|[32480629] gi|29150256|ref|NG 002679,1|[29150256] gi|29336064|refING 002680.1|f293360641 gi|29336072|ref|NG 002681.1|[29336072] gi|32480626|ref|NG 002682,1|(32480626) gi|32480632|ref|NG\_002683.1|[32480632] gi|29336067|ref|NG\_002684.1|[29336067] gi|29336075|ref|NG\_002685.1|[29336075] gl|29171299|ref|NG\_002687.1|[29171299] gi|29171302|ref|NG\_002688.1|[29171302] gi|29171308|ref|NG\_002689.1|[29171308] gi|30316443|ref|NG\_002690.1|[30316443] gi|29383684|refING 002691.1|[29383684] gi|29366831|refING 002692,1|[29366831] gi|29366836|ref|NG\_002693.1|[29366836] gi|29366839|ref|NG 002694,1|[29366839] gij29423716|ref|NG 002696.1|[29423716] gi|29423717|ref|NG\_002697.1|[29423717] gi|29423718|ref|NG\_002698.1|[29423718] gi|29469072|ref|NG\_002699.1|[29469072] gl|41281879|ref|NG\_002700.1|[41281879] gil41281900lrefING 002701.1[[41281900] gi|41281903|ref|NG 002702.1|[41281903] gl|30242643|ref|NG 002703.1|[30242643] gl|30242644|ref|NG 002705.1|[30242644] gl|30242646|ref|NG\_002707.1|[30242646] gi|30242650|ref|NG 002709.1|[30242650] gl[30242655]ref[NG\_002711.1][30242655] g||30242641|ref|NG\_002713.1||30242641| gil29824428lrefING 002716.1I[29824428] gli29725628|refING 002717.1|[29725628] gi|29725625|refING 002718,1|[29725625] gi|29725629|ref|NG\_002719.1|[29725629] gi|29725630|ref|NG\_002720.1|[29725630] gi|29725631|ref|NG 002721,1|[29725631] gi|29837651|ref|NG 002723,1|[29837651] gi|30089684|ref|NG 002724.1|[30089684] gi|29837660|ref|NG\_002725.1|[29837660] gi|29837663|ref|NG\_002726.1|[29837663] gi|30089698|ref|NG\_002727.1|[30089698] gi|30089699|ref|NG\_002728.1|[30089699] gi|30089700|ref|NG 002729.1|[30089700] gi|30089701|ref|NG 002731.1|[30089701]

gi[30089702|ref[NG\_002733.1][30089702] gil30172549lrefING 002735,1II301725491 gi|30172550|ref|NG\_002736.1|[30172550] all30172551lrefING 002737.1lf301725511 gil30172552|ref|NG 002738,1|[30172552] glj30172553|ref|NG 002739,1||30172553| gi|30172554|ref|NG\_002740.1|[30172554] gi|30172555|ref|NG 002741.1|[30172555] gi|30172556|ref|NG 002742,1|[30172556] gi|30172557|ref|NG 002743.1|[30172557] gi|30172558|ref|NG 002744.1|[30172558] gi|30172559|ref|NG 002745.1|[30172559] gil30387634|refING 002746,1|[30387634] gil30387635|refING 002747.1|[30387635] gi|30387636|ref|NG\_002748.1|[30387636] gi|30425556|ref|NG\_002749.1|[30425556] gil30425554|refING 002750.1|[30425554] gli30425555|refING 002752.1|[30425555] gl|30425558|ref|NG 002753.1|[30425558] gl|30425559|ref|NG 002754.1|[30425559] gl|30520308|ref|NG\_002761.1|[30520308] gi|32996738|ref|NG\_002762.1|[32996738] gi|39841019|ref|NG\_002763.2|[39841019] gll30520304|refING 002764,1|[30520304] gll32996739|refING 002765,1|[32996739] all30520307 refING 002766.1 [30520307] gl|30520323|ref|NG 002767.1|[30520323] gl|32996740|refING 002768.1|[32996740] gi|30520344|refING 002769.1|[30520344] gi|30520355|ref|NG\_002770.1|[30520355] gi|30578394|ref|NG\_002771.1|[30578394] gi|30578387|ref|NG\_002772.1|[30578387] gl[32189419]ref[NG\_002773.1][32189419] gl|30911114|ref|NG\_002775.1|[30911114] gi|30911110|ref|NG\_002776.1|[30911110] gi|30911116|ref|NG\_002777.1|[30911116] gi|30911118|ref|NG\_002778.1|[30911118] gi|30911115|ref|NG 002779,1|[30911115] gl|30911119|ref|NG 002780.1|[30911119] gl|30911117|ref|NG 002781.1|[30911117] gl|30911120|ref|NG 002782.1|[30911120] gl|32189416|ref|NG\_002785.1|[32189416] gi|31126969|ref|NG\_002786.1|[31126969] gi|31126964|ref|NG\_002787.1|[31126964] gi|31340733|ref|NG\_002788.1|[31340733] gli31791043lrefING 002790.1li317910431 gi|32171234|ref|NG 002791.1|[32171234] gi|32171197|ref|NG\_002792.1|[32171197] gi|32307633|ref|NG\_002793.1|[32307633] gi|32996710|ref|NG 002795.1|[32996710] gi|47575700|ref|NG 002796.2|[47575700] gi|32996711|ref|NG\_002797.1|[32996711] gi|32996712|ref|NG 002798,1|[32996712] gil32490568lrefING 002799.1I[32490568] gi|32996713|ref|NG 002800.1|[32996713] gl|32563558|ref|NG 002801.1|[32563558] gi|32563560|ref|NG 002802.1|[32563560]

gi|32563559|ref|NG 002803.1|[32563559] gi|32563563|ref|NG 002804.1|[32563563] gi|32698797|ref|NG\_002805.1|[32698797] gi|32698793|ref[NG\_002806.1|[32698793] gi|32698799|ref|NG\_002807.1|[32698799] gi|32698796|ref|NG\_002808.1|[32698796] gi|32698801|ref|NG\_002809.1|[32698801] gi[32698798]ref[NG\_002810.1][32698798] gij32698803|ref|NG\_002811.1|[32698803] g||32698800|ref|NG\_002812.1|[32698800] gij32698805[ref[NG\_002813.1][32698805] gil32698802|ref[NG 002814.1|[32698802] gi|32698804|ref|NG 002815.1|[32698804] gi|32698810|ref|NG\_002816.1|[32698810] gij32698806|ref|NG 002817.1|[32698806] gi|32698813|ref|NG\_002818.1|[32698813] gij32698809|ref|NG\_002819.1|[32698809] gi|32698811|ref|NG\_002821.1|[32698811] gi|32698812|ref|NG\_002822.1|[32698812] gij32698816|ref|NG\_002823.1|[32698816] ali32698817irefING 002824.1i[32698817] gil32698818|refING 002825.1|[32698818] glj32698819[ref]NG\_002826.1[[32698819] ali32698833|refING 002827.1|[32698833] gij32698842|ref|NG 002828.1|[32698842] gl|32698843|ref|NG\_002829.1|[32698843] g||32698862|ref|NG\_002830.1|[32698862] gli32698999|refING 002831,1|[32698999] gil32699024|refING 002832.1|[32699024] gil32699031|refING 002833.1|[32699031] ali32699039|refING 002834.1|[32699039] gil32699034|refING 002835.1|[32699034] gi[32699040|ref[NG\_002836.1|[32699040] gij32699043|ref|NG\_002837.1|[32699043] gl|32699046|ref|NG\_002838.1|[32699046] gi|32699077|ref|NG 002839.1|[32699077] gl|32699078|ref|NG\_002840.1|[32699078] gi|32699079|ref|NG\_002841.1|[32699079] gi|32699080|ref|NG\_002842.1|[32699080] gij32699081|ref[NG\_002843.1|[32699081] gi|32699082|ref|NG\_002844.1|[32699082] gij32699083|ref|NG\_002845.1|[32699083] glj32699084|ref|NG\_002846.1|[32699084] gil32699085[refING 002847.1][32699085] gi[32699086]ref[NG 002848.1][32699086] gij32699087[ref]NG 002849.1[[32699087] gi|32699088|ref|NG 002850.1|[32699088] gi|32699089|ref|NG\_002851.1|[32699089] gi|32699090|ref|NG\_002852.1|[32699090] gi|32699091|ref|NG\_002853.1|[32699091] gi[32699092]ref[NG\_002854.1][32699092] gi[32699095]ref[NG\_002855.1][32699095] gil32699096|ref[NG\_002856.1][32699096] gi|32699097|ref|NG 002857.1|[32699097] ali32699098|ref|NG 002858.1|[32699098] gi[32699099]ref[NG\_002859.1][32699099] gi|32699100|ref|NG\_002860.1|[32699100]

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gi|48597030|ref|NG\_004130.1|[48597030] gil48597033[ref[NG\_004131.1][48597033] gi|48597034|ref|NG\_004132.1|[48597034] gi|48597036|ref|NG\_004133.1|[48597036] gi|48597037|ref|NG\_004134.1|[48597037 gi|48597038|ref|NG\_004135.1|[48597038] gi|48597040|ref|NG\_004136.1|[48597040] gi|48597041|ref|NG\_004137.1|[48597041] gi|48597043|ref|NG\_004138.1|[48597043] gl|48597039|ref|NG\_004139.1|[48597039] gi|48597045|ref|NG\_004140.1|[48597045] gl|48597042|ref|NG\_004141.1|[48597042] gi|48597047|ref|NG\_004142.1|[48597047] gi[48597044|ref|NG\_004143.1|[48597044] gi|48597049|ref|NG\_004144.1|[48597049] gi|48597046|ref|NG\_004145.1|[48597046] glj48597050|ref|NG\_004146.1|[48597050] gi|48597048|ref|NG\_004147.1|[48597048] gl|48597051|ref|NG\_004148.1|[48597051] gl|48597052|ref|NG\_004149.1|[48597052] gi|48597053|ref|NG\_004150.1|[48597053] gi|48597054|ref[NG\_004151.1|[48597054] gi|48597055|ref|NG\_004152.1|[48597055] gl|48597056|ref|NG\_004153.1|[48597056] gi|48597059|ref|NG\_004154.1|[48597059] gi|48597057|ref|NG\_004155.1|[48597057] gi[48597060]ref[NG\_004156.1][48597060] gi[48597058]ref[NG\_004157.1][48597058] al|48597061|ref[NG\_004158.1|[48597061] gl|48597062|ref|NG\_004159.1|[48597062] gi|48597063|ref|NG\_004160.1|[48597063] gli48597064|refING\_004161.1|[48597064] gl|48597065|ref|NG\_004162.1|[48597065] gi|48597066|ref|NG\_004163.1|[48597066] gi|48597067|ref|NG\_004164.1|[48597067] gi|48597068|ref|NG\_004165.1|[48597068] gl|48597069|ref|NG\_004166.1|[48597069] gl|48597070|ref|NG\_004167.1|[48597070] gl|48717107|ref|NG\_004168.1|[48717107] gi|48717108|ref|NG\_004169.1|[48717108] gl|48717109|ref|NG\_004170.1|[48717109] gi|48717110|ref|NG\_004171.1|[48717110] gi|48717111|ref|NG\_004172.1|[48717111] gl|48717112|ref|NG\_004173.1|[48717112] gli48717113|ref|NG\_004174.1|[48717113] g||48717114|ref|NG\_004175.1|[48717114] gi|48717115|ref|NG\_004176.1|[48717115] gi|48717116|ref|NG\_004177.1|[48717116] gi|48717117|ref|NG\_004178.1|[48717117] gi|48717118|ref|NG\_004179.1|[48717118] gil48717119|ref|NG\_004180.1|[48717119] gi[48717120|ref]NG\_004181.1[[48717120] gi|48717121|ref|NG\_004182.1|[48717121] gi|48717122|ref|NG\_004183.1|[48717122] gi|48717123|ref|NG\_004184.1|[48717123] gi|48717124|ref|NG\_004185.1|[48717124] al|48717125|ref|NG\_004186.1|[48717125]

gi|48717127|ref|NG\_004188.1|[48717127] gi|48717128|ref|NG\_004189.1|[48717128] gi|48717129|ref|NG\_004190.1|[48717129] gi|48717130|ref|NG\_004191.1|[48717130] gil48717131IrefING 004192.1[[48717131] gil48717132[refING 004193,1][48717132] gil487171331refING 004194.1[[48717133] gil48717134|refING 004195.1|[48717134] al|48717135|refING 004196.1|[48717135] gi|48717136|ref|NG 004197.1|[48717136] gi|48717137|ref|NG\_004198.1|[48717137] gi|48717138|ref|NG\_004199.1|[48717138] gi|48717139|ref|NG\_004200.1|[48717139] gi|48717140|ref|NG\_004201.1|[48717140] gi|48717141|ref|NG\_004202.1|[48717141] gij48717142|ref|NG\_004203.1|[48717142] gi|48717143|ref|NG\_004204.1|[48717143] gij48717144|ref|NG\_004205.1|[48717144] gij48717145|ref|NG\_004206.1|[48717145] gij48717146|ref|NG 004207.1|[48717146] aii48717147|ref|NG 004208.1|[48717147] qi|48717148|ref|NG 004209.1|[48717148] gij48717149|ref|NG\_004210.1|[48717149] gi|48717150|ref|NG\_004211.1|[48717150] gil48717151|refING\_004212.1|[48717151] gi|48717152|ref|NG\_004213.1|[48717152] gi|48717153|ref|NG\_004214.1|[48717153] gi|48717154|ref|NG\_004215.1|[48717154] gi|48717155|ref|NG\_004216.1|[48717155] gli48717156irefING 004217.1[48717156] gil48717157[refING 004218.1][48717157] gil48717158|ref|NG\_004219.1|[48717158] g[[48717159]ref[NG\_004220.1][48717159] gl[48717160]ref[NG\_004221.1][48717160] gij48717161|ref|NG\_004222.1|[48717161] gi|48717162|ref|NG\_004223.1|[48717162] gli48717163[refING 004224.1][48717163] gli48717164|refING 004225.1|[48717164] gil48717165|refING 004226.1|[48717165] gil48717166|ref|NG 004227.1|[48717166] gij48717167[ref]NG 004228.1[[48717167] gl|48717168|ref|NG 004229.1|[48717168] gi|48717169|ref|NG\_004230.1|[48717169] gi|48717170|ref|NG\_004231.1|[48717170] gi|48717171|ref|NG\_004232.1|[48717171] gl|48717172|ref|NG\_004233.1|[48717172] gi|48717173|ref|NG\_004234.1|[48717173] gi|48717174|refING 004235.1|[48717174] gil48717175|refING 004236.1|[48717175] gl|48717176|ref|NG\_004237.1|[48717176] gi|48717177|ref|NG 004238.1|[48717177] gi|48717178|ref|NG\_004239.1|[48717178] gij48717179|ref|NG 004240.1|[48717179] gij48717180|ref|NG\_004241.1|[48717180] gi|48717181|ref|NG\_004242.1|[48717181] gil48717182|ref|NG 004243.1|[48717182] gil48717183|refING 004244.1|[48717183]

gi|48717184|ref|NG\_004245.1|[48717184] gi|48717185|ref|NG\_004246.1|[48717185] gi|48717186|ref|NG\_004247.1|[48717186] gi|48717187|ref|NG\_004248.1|[48717187] gil48717188irefING 004249.1[[48717188] gi|48717189|ref|NG 004250.1|[48717189] gi|48717190|ref|NG\_004251.1|[48717190] gil48717191[ref[NG 004252.1][48717191] gi|48717192|ref|NG\_004253.1|[48717192] gij48717193|ref|NG 004254.1|[48717193] gij48717194|ref|NG\_004255.1|[48717194] gil48717195lrefING 004256.1[[48717195] gil48717196|refING 004257,1|[48717196] gil48717197IrefING 004258.1[[48717197] gij48717198|ref|NG\_004259.1|[48717198] gij48717199|ref|NG\_004260.1|[48717199] gi|48717200|ref|NG\_004261.1|[48717200] gil48717201|refING 004262.1|[48717201] gi|48717202|ref|NG\_004263.1|[48717202] gi|48717203|ref|NG\_004264.1|[48717203] gij48717204|refING 004265.1|[48717204] gij48717205|ref|NG\_004266.1|[48717205] gi|48717206|ref|NG\_004267.1|[48717206] gij48717207|ref|NG\_004268.1|[48717207] gi|48717208|ref|NG\_004269.1|[48717208] gi|48717209|ref|NG\_004270.1|[48717209] gi|48717210|ref|NG\_004271.1|[48717210] gli48717211|refING\_004272.1|[48717211] gil48717212|refING 004273.1|[48717212] ail48717213/refING 004274.1/[48717213] gi|48717214|ref|NG\_004275.1|[48717214] gi|48717215|ref|NG\_004276.1|[48717215] gi|48717216|ref|NG\_004277.1|[48717216] g||48717217|ref|NG\_004278.1|[48717217] gl|48717218|ref|NG\_004279.1|[48717218] gl|48717219|ref|NG\_004280.1|[48717219] gi|48717220|ref|NG\_004281.1|[48717220] gi|48717221|ref|NG\_004282.1|[48717221] gil48717222[refING 004283.1][48717222] gil48717223lrefING 004284.1[[48717223] gil48717224[refING 004285.1][48717224] gl|48717227|ref|NG\_004286.1|[48717227] gi|48717228|ref|NG\_004287.1|[48717228] gi|48717229|ref|NG\_004288.1|[48717229] gi|48717232|ref|NG\_004289.1|[48717232] gi|48717237|ref|NG\_004290.1|[48717237] gi|48717242|ref|NG\_004291.1|[48717242] gil48717245lrefING 004292.1[[48717245]] gi|48717246|ref|NG\_004293.1|[48717246] gij48717247[refING 004294.1][48717247] gi|48717250|ref|NG\_004295.1|[48717250] gil48717251[ref]NG 004296.1[[48717251] gi|48717252|ref|NG 004297.1|[48717252] gi|48717253|ref|NG\_004298.1|[48717253] gi|48717254|ref|NG\_004299.1|[48717254] gi|48717255|ref|NG\_004300.1|[48717255] gil48717256|ref|NG 004301.1|[48717256]

gi|48717257|ref|NG 004302.1|[48717257] gi|48717258|ref|NG 004303.1|[48717258] gi|48717259|ref|NG 004304.1|[48717259] gi|48717260|ref|NG\_004305.1|[48717260] gi|48717266|ref|NG 004307.1|[48717266] gi|48717267|ref|NG 004308.1|[48717267] gi|48717271|ref|NG 004309.1|[48717271] gi|48717273|ref|NG\_004310.1|[48717273] gl|48717270|ref|NG 004311.1|[48717270] gi|48717275|ref|NG\_004312.1|[48717275] gi|48717272|ref|NG\_004313.1|[48717272] gi|48717274|ref|NG\_004314.1|[48717274] gi|48717276|ref|NG\_004315.1|[48717276] gi|48717287|ref|NG 004317.1|[48717287] gil48717283|ref|NG 004318.1|[48717283] gi|48717289|ref|NG 004319.1|[48717289] gi|48717286|ref|NG 004320.1|[48717286] gi|48717291|ref|NG\_004321.1|[48717291] gi|48717288|ref|NG\_004322,1|[48717288] gi|48717293|ref|NG\_004323.1|[48717293] gi|48717290|ref|NG\_004324.1|[48717290] gl|48717295|ref|NG\_004325.1|[48717295] gi|48717292|ref|NG\_004326.1|[48717292] gi|48717297|ref|NG\_004327.1|[48717297] gl|48717294|ref|NG\_004328.1|[48717294] gi|48717299|ref|NG\_004329.1|[48717299] gi|48717296|ref|NG\_004330.1|[48717296] gi|48717301|ref|NG\_004331.1|[48717301] gi|48717298|ref|NG\_004332.1|[48717298] gi|48717303|ref|NG\_004333.1|[48717303] gi|48717300|ref|NG\_004334.1|[48717300] gl|48717305|ref|NG\_004335.1|[48717305] gi|48717302|ref|NG\_004336.1|[48717302] gi|48717307|ref|NG\_004337.1|[48717307] gii48717304[ref[NG\_004338.1[[48717304] gli48717309|ref|NG\_004339.1|[48717309] gl|48717306|ref|NG\_004340.1|[48717306] gi|48717311|ref|NG\_004341.1|[48717311] gi[48717308|ref|NG\_004342.1|[48717308] gl|48717313|ref|NG\_004343.1|[48717313] gi|48717310|refING 004344.1|[48717310] gi|48717315|ref|NG 004345,1|[48717315] gi|48717312|ref|NG\_004346,1|[48717312] gi|48717317|ref|NG\_004347.1|[48717317] gi|48717314|ref|NG\_004348.1|[48717314] gi|48717319|ref|NG 004349.1|[48717319] gi|48717316|ref|NG 004350,1|[48717316] gi|48717321|ref[NG 004351.1||48717321] gi|48717318|ref|NG\_004352.1|[48717318] gi|48717325|ref|NG\_004353.1|[48717325] gi|48717320|ref|NG\_004354.1|[48717320] gi|50054346|ref|NG\_004355.2|[50054346] gi|48717330|ref|NG\_004356.1|[48717330] gi|48717326|ref|NG 004357.1|[48717326] gij48717332|ref|NG 004358.1|[48717332] gi|48717329|ref|NG 004359.1|[48717329] gi|48717334|ref|NG\_004360.1|[48717334]

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gi|48717461|ref|NG_004419.1|[48717461]
gi|48717462|ref|NG_004420.1|[48717462]
gil48717465|ref|NG 004421.1|[48717465]
gil48717463|ref|NG 004422,1|[48717463]
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 ${\bf Table~II}$  Non-limiting examples of Stabilization Chemistries for chemically modified siNA constructs

Chemistry	pyrimidine	Purine	cap	p=S	Stramd
"Stab 00"	Ribo	Ribo	TT at 3'- ends		S/AS
"Stab 1"	Ribo	Ribo	-	5 at 5'-end 1 at 3'-end	S/AS
"Stab 2"	Ribo	Ribo	-	All linkages	Usually AS
"Stab 3"	2'-fluoro	Ribo	-	4 at 5'-end 4 at 3'-end	Usually S
"Stab 4"	2'-fluoro	Ribo	5' and 3'- ends	-	Usually S
"Stab 5"	2'-fluoro	Ribo	-	1 at 3'-end	Usually AS
"Stab 6"	2'-O-Methyl	Ribo	5' and 3'- ends	-	Usually S
"Stab 7"	2'-fluoro	2'-deoxy	5' and 3'- ends	-	Usually S
"Stab 8"	2'-fluoro	2'-O- Methyl	-	1 at 3'-end	S/AS
"Stab 9"	Ribo	Ribo	5' and 3'- ends	-	Usually S
"Stab 10"	Ribo	Ribo	-	1 at 3'-end	Usually AS
"Stab 11"	2'-fluoro	2'-deoxy	-	1 at 3'-end	Usually AS
"Stab 12"	2'-fluoro	LNA	5' and 3'- ends		Usual <b>1</b> y S
"Stab 13"	2'-fluoro	LNA		1 at 3'-end	Usually AS
"Stab 14"	2'-fluoro	2'-deoxy		2 at 5'-end 1 at 3'-end	Usually AS
"Stab 15"	2'-deoxy	2'-deoxy		2 at 5'-end 1 at 3'-end	Usually AS
"Stab 16"	Ribo	2'-O- Methyl	5' and 3'- ends		Usually S
"Stab 17"	2'-O-Methyl	2'-O- Methyl	5' and 3'- ends		Usually S
"Stab 18"	2'-fluoro	2'-O- Methyl	5' and 3'- ends		Usually S
"Stab 19"	2'-fluoro	2'-O- Methyl	3'-end		S/A.S
"Stab 20"	2'-fluoro	2'-deoxy	3'-end		Usually AS
"Stab 21"	2'-fluoro	Ribo	3'-end		Usually AS
"Stab 22"	Ribo	Ribo	3'-end		Usually AS
"Stab 23"	2'-fluoro*	2'-deoxy*	5' and 3'- ends		Usual Iv S
"Stab 24"	2'-fluoro*	2'-O- Methyl*	=	1 at 3'-end	S/A.S

"Stab 25"	2'-fluoro*	2'-O- Methyl*	=	1 at 3'-end	S/AS
"Stab 26"	2'-fluoro*	2'-O- Methyl*	=		<u>s/As</u>
<u>"Stab 27"</u>	2'-fluoro*	2'-O- Methyl*	3'-end		S/AS
"Stab 28"	2'-fluoro*	2'-O- Methyl*	3'-end		<u>S/AS</u>
"Stab 29"	2'-fluoro*	2'-O- Methyl*		1 at 3'-end	<u>S/AS</u>
<u>"Stab 30"</u>	2'-fluoro*	2'-O- Methyl*			S/AS
<u>"Stab 31"</u>	2'-fluoro*	2'-O- Methyl*	3'-end		S/AS
<u>"Stab 32"</u>	2'-fluoro	2'-O- Methyl			S/AS

CAP = any terminal cap, see for example Figure 10.

All Stab 00-32 chemistries can comprise 3'-terminal thymidine (TT) residues

All Stab 00-32 chemistries typically comprise about 21 nucleotides, but can vary as described 5 herein.

S = sense strand

AS = antisense strand

\*Stab 23 has a single ribonucleotide adjacent to 3'-CAP

\*Stab 24 and Stab 28 have a single ribonucleotide at 5'-terminus

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\*Stab 26, Stab 26, and Stab 27 have three ribonucleotides at 5'-terminus
\*Stab 29, Stab 30, and Stab 31, any purine at first three nucleotide positions from 5'-terminus are ribonucleotides

p = phosphorothioate linkage

15

Table III

A. 2.5 µmol Synthesis Cycle ABI 394 Instrument

Reagent	Equivalents	Amount	Wait Time* DNA	Wait Time* 2'-O-methyl	Wait Time*RNA
Phosphoramidites	6.5	163 µL	45 sec	2.5 min	7.5 min
S-Ethyl Tetrazole	23.8	238 µL	45 sec	2.5 min	7.5 min
Acetic Anhydride	100	233 µL	5 sec	5 sec	5 sec
N-Methyl Imidazole	186	233 pL	5 sec	5 sec	5 sec
TCA	176	2.3 mL	21 sec	21 sec	21 sec
iodine	11.2	1.7 mL	45 sec	45 sec	45 sec
Beaucage	12.9	645 µL	100 sec	300 sec	300 sec
Acetonitrile	NA	6.67 mL	NA NA	NA	NA

B. 0.2 µmol Synthesis Cycle ABI 394 Instrument

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Reagent	Equivalents	Amount	Wait Time* DNA	Wait Time* 2'-O-methyl	Wait Time*RNA
Phosphoramidites	15	31 µL	45 sec	233 sec	465 sec
S-Ethyl Tetrazole	38.7	31 µL	45 sec	233 min	465 sec
Acetic Anhydride	655	124 µL	5 sec	5 sec	5 sec
N-Methyl Imidazole	1245	124 µL	5 sec	5 sec	5 sec
TCA	700	732 µL	10 sec	10 sec	10 sec
lodine	20.6	244 µL	15 sec	15 sec	15 sec
Beaucage	7.7	232 µL	100 sec	300 sec	300 sec
Acetonitrile	NA	2,64 mL	NA	NA	NA

## C. 0,2 µmol Synthesis Cycle 96 well Instrument

Reagent	Equivalents: DNA/ 2'-O-methyl/Ribo	Amount: DNA/2'-O- methyl/Ribo	Wait Time* DNA	Wait Time* 2'-O- methyl	Wait Time* Rlbo
Phosphoramidites	22/33/66	40/60/120 µL	60 sec	180 sec	360sec
S-Ethyl Tetrazole	70/105/210	40/60/120 µL	60 sec	180 min	360 sec
Acetic Anhydride	265/265/265	50/50/50 μL	10 sec	10 sec	10 sec
N-Methyl Imidazole	502/502/502	50/50/50 µL	10 sec	10 sec	10 sec
TCA	238/475/475	250/500/500 µL	15 sec	15 sec	15 sec
lodine	6.8/6.8/6.8	80/80/80 µL	30 sec	30 sec	30 sec
Beaucage	34/51/51	80/120/120	100 sec	200 sec	200 sec
Acetonitrile	NA	1150/1150/1150 µL	NA	NA	NA.

- Wait time does not include contact time during delivery.
- · Tandem synthesis utilizes double coupling of linker molecule

## CLAIMS

#### What we claim is:

- A chemically synthesized double stranded short interfering nucleic acid (siNA)
  molecule that directs cleavage of an expressed pseudogene target RNA via RNA
  interference (RNAi), wherein:
  - a) each strand of said siNA molecule is about 18 to about 23 nucleotides in length; and
  - b) one strand of said siNA molecule comprises nucleotide sequence having sufficient complementarity to said expressed pseudogene target RNA for the siNA molecule to direct cleavage of the expressed pseudogene target RNA via RNA interference.
- The siNA molecule of claim 1, wherein said siNA molecule comprises no ribonucleotides.
- The siNA molecule of claim 1, wherein said siNA molecule comprises one or more ribonucleotides.
- 4. The siNA molecule of claim 1, wherein one strand of said double-stranded siNA molecule comprises a nucleotide sequence that is complementary to a nucleotide sequence of the expressed pseudogene target RNA or a portion thereof, and wherein a second strand of said double-stranded siNA molecule comprises a nucleotide sequence substantially similar to the nucleotide sequence or a portion thereof of the expressed pseudogene target RNA.
- The siNA molecule of claim 4, wherein each strand of the siNA molecule comprises about 18 to about 23 nucleotides, and wherein each strand comprises at least about 19 nucleotides that are complementary to the nucleotides of the other strand.
- 6. The siNA molecule of claim 1, wherein said siNA molecule comprises an antisense region comprising a nucleotide sequence that is complementary to a nucleotide sequence of the expressed pseudogene target RNA or a portion thereof, and wherein said siNA further comprises a sense region, wherein said sense region comprises a nucleotide sequence substantially similar to the nucleotide sequence of the expressed pseudogene target RNA or a portion thereof.

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7. The siNA molecule of claim 6, wherein said antisense region and said sense region comprise about 18 to about 23 nucleotides, and wherein said antisense region comprises at least about 18 nucleotides that are complementary to nucleotides of the sense region.

- 8. The siNA molecule of claim 1, wherein said siNA molecule comprises a sense region and an antisense region, and wherein said antisense region comprises a nucleotide sequence that is complementary to a nucleotide sequence the expressed pseudogene target RNA or a portion thereof, and said sense region comprises a nucleotide sequence that is complementary to said antisense region.
- The siNA molecule of claim 6, wherein said siNA molecule is assembled from two separate oligonucleotide fragments wherein one fragment comprises the sense region and a second fragment comprises the antisense region of said siNA molecule.
- The siNA molecule of claim 6, wherein said sense region is connected to the antisense region via a linker molecule.
- The siNA molecule of claim 10, wherein said linker molecule is a polynucleotide linker.
- The siNA molecule of claim 10, wherein said linker molecule is a non-nucleotide linker.
- The siNA molecule of claim 6, wherein pyrimidine nucleotides in the sense region are
   2'-O-methyl pyrimidine nucleotides.
- 14. The siNA molecule of claim 6, wherein purine nucleotides in the sense region are 2'-deoxy purine nucleotides.
- 15. The siNA molecule of claim 6, wherein pyrimidine nucleotides present in the sense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides.
- 16. The siNA molecule of claim 9, wherein the fragment comprising said sense region includes a terminal cap moiety at a 5'-end, a 3'-end, or both of the 5' and 3' ends of the fragment comprising said sense region.
- The siNA molecule of claim 16, wherein said terminal cap moiety is an inverted deoxy abasic moiety.

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- The siNA molecule of claim 6, wherein pyrimidine nucleotides of said antisense region are 2'-deoxy-2'-fluoro pyrimidine nucleotides.
- The siNA molecule of claim 6, wherein purine nucleotides of said antisense region are 2'-O-methyl purine nucleotides.
- The siNA molecule of claim 6, wherein purine nucleotides present in said antisense region comprise 2'-deoxy- purine nucleotides.
- The siNA molecule of claim 18, wherein said antisense region comprises a
  phosphorothioate internucleotide linkage at the 3' end of said antisense region.
- The siNA molecule of claim 6, wherein said antisense region comprises a glyceryl
  modification at a 3' end of said antisense region.
- The siNA molecule of claim 9, wherein each of the two fragments of said siNA molecule comprise about 21 nucleotides.
- 24. The siNA molecule of claim 23, wherein about 19 nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule and wherein at least two 3' terminal nucleotides of each fragment of the siNA molecule are not base-paired to the nucleotides of the other fragment of the siNA molecule.
- The siNA molecule of claim 24, wherein each of the two 3' terminal nucleotides of each fragment of the siNA molecule are 2'-deoxy-pyrimidines.
- The siNA molecule of claim 25, wherein said 2'-deoxy-pyrimidine is 2'-deoxythymidine.
- 27. The siNA molecule of claim 23, wherein all of the about 21 nucleotides of each fragment of the siNA molecule are base-paired to the complementary nucleotides of the other fragment of the siNA molecule.
- 28. The siNA molecule of claim 23, wherein about 19 nucleotides of the antisense region are base-paired to the nucleotide sequence of the expressed pseudogene target RNA or a portion thereof.
- 29. The siNA molecule of claim 23, wherein about 21 nucleotides of the antisense region are base-paired to the nucleotide sequence of the expressed pseudogene target RNA or a portion thereof.

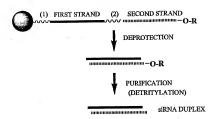
 The siNA molecule of claim 9, wherein a 5'-end of the fragment comprising said antisense region optionally includes a phosphate group.

- A composition comprising the siNA molecule of claim 1 in an pharmaceutically acceptable carrier or diluent.
- 32. The siNA molecule of claim 1, wherein said expressed pseudogene target is a disease related expressed pseudogene.

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## Figure 1



= SOLID SUPPORT

= TERMINAL PROTECTING GROUP FOR EXAMPLE: DIMETHOXYTRITYL (DMT)

= CLEAVABLE LINKER (FOR EXAMPLE: NUCLEOTIDE SUCCINATE OR INVERTED DEOXYABASIC SUCCINATE) = CLEAVABLE LINKER

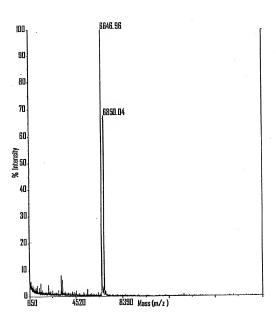
(FOR EXAMPLE: NUCLEOTIDE SUCCINATE OR INVERTED DEOXYABASIC SUCCINATE)

INVERTED DEOXYABASIC SUCCINATE LINKAGE

GLYCERYL SUCCINATE LINKAGE

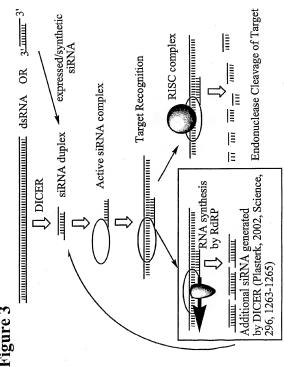
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Figure 2



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Figure 3



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## Figure 4

```
SENSE STRAND (SEQ ID NO 1)
               ALL POSITIONS RIBONUCLEOTIDE EXCEPT POSITIONS (N N)
      5'-
               -3
Α
           31-
                                                        -5'
                         ANTISENSE STRAND (SEQ ID NO 2)
                 ALL POSITIONS RIBONUCLEOTIDE EXCEPT POSITIONS (N N)
                       SENSE STRAND (SEO ID NO 3)
         PYRIMIDINES = 2'-FLUORO AND ALL PURINES = 2'-OM EXCEPT POSITIONS (N N)
       5'-
               -31
B
           31-
                                                        -51
                      ANTISENSE STRAND (SEQ ID NO 4)
        L PYRIMIDINES = 2'-FLUORO AND ALL PURINES = 2'-O-MÉ EXCEPT POSITIONS (N N)
                        SENSE STRAND (SEO ID NO 5)
             ALL PYRIMIDINES = 2'-O-ME OR 2'-FLUORO EXCEPT POSITIONS (N N)
              -31
       3'-
            -5
                         ANTISENSE STRAND (SEQ ID NO 6)
                   ALL PYRIMIDINES = 2'-FLUORO EXCEPT POSITIONS (N
      SENSE STRAND (SEQ ID NO 7)
ALL PYRIMIDINES = 2'-FLUORO EXCEPT POSITIONS (N N) AND ALL PURINES = 2'-DEOX'S
      5'-
               -31
D
          3'-
                                                        -51
                      ANTISENSE STRAND (SEQ ID NO 4)
      ALL PYRIMIDINES = 2'-FLUORO AND ALL PURINES = 2'-O-MÉ EXCEPT POSITIONS (N N)
                         SENSE STRAND (SEQ ID NO 8)
                 ALL PYRIMIDINES = 2'-FLUORO EXCEPT POSITIONS (N N)
      51-
               B-NNNNNNNNNNNNNNNNNNNNNNNNNN-B -3'
E
         -5'
                      ANTISENSE STRAND (SEQ ID NO 4)
        L PYRIMIDINES = 2'-FLUORO AND ALL PURINES = 2'-O-MÉ EXCEPT POSITIONS (N N)
                       SENSE STRAND (SEO ID NO 7)
     ALL PYRIMIDINES = 2-FLUORO EXCEPT POSITIONS (N N) AND ALL PURINES = 2'-DEOXY
      5'-
              -31
F
      3'-
           -51
                     ANTISENSE STRAND (SEQ ID NO 9)
     ALL PYRIMIDINES = 2'-FLUORO EXCEPT POSITIONS (N N) AND ALL PURINES = 2'-DEOXY
```

POSITIONS (NN) CAN COMPRISE ANY NUCLEOTIDE. SUCH AS DEOXYNUCLEOTIDES (eg. THYMIDINÉ) OR UNIVERSAL BASES

B = ABASIC, INVERTED ABASIC, INVERTED NUCLEOTIDE OR OTHER TERMINAL CAP THAT IS OPTIONALLY PRESENT

L = GLYCERYL or B THAT IS OPTIONALLY PRESENT

S = PHOSPHOROTHIOATE OR PHOSPHORODITHIOATE that is optionally absent

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# Figure 5

SENSE STRAND (SEQ ID NO 10) B-CGACCUCUGCUGCUUUGCUTT-B -31 L-T<sub>S</sub>T GCUGGAGACGACGAAACGA -5' ANTISENSE STRAND (SEQ ID NO 11) SENSE STRAND (SEQ ID NO 12)  $c\, \underline{a}\, \underline{c}\, \underline{c}\, \underline{u}\, \underline{c}\, \underline{u}\, \underline{g}\, \underline{c}\, \underline{u}\, \underline{u}\, \underline{u}\, \underline{g}\, \underline{c}\, \underline{u}\, \underline{u}\, \underline{u}\, \underline{g}\, \underline{c}\, \underline{u}\, T_S T$ -31 5'-В -51 3'-L-TSTgcuggagacgacgaaacga ANTISENSE STRAND (SEQ ID NO 13) SENSE STRAND (SEQ ID NO 14) B-cGAccucuGcuGcuuuGcuTT-B -31 5'-L-T<sub>S</sub>TGcuGGAGAcGAAAcGA -51 3'-ANTISENSE STRAND (SEQ ID NO 15) SENSE STRAND (SEQ ID NO 16) -3' B-cGAccucuGcuGcuuuGcuTT-B -51 3'-L-TSTgcuggagacgacgaaacga ANTISENSE STRAND (SEO ID NO 13) SENSE STRAND (SEQ ID NO 17) -3' 5'-В-с G Ассиси G си G сии и G си ТТ-В  $\mathbf{E}$ -5' 3'-L-T<sub>S</sub>T g c u g g a g a c g a c g a a a c g a ANTISENSE STRAND (SEQ ID NO 13) SENSE STRAND (SEQ ID NO 16) -31 5'-В-с GAссиси Gси Gсиии Gси ТТВ F L-T<sub>S</sub>T G c u G G A G A c G A c G A A A c G A -5' 31-ANTISENSE STRAND (SEQ ID NO 18)

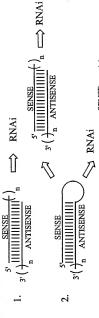
lower case = 2'-O-Methyl or 2'-deoxy-2'-fluoro italic lower case = 2'-deoxy-2'-fluoro

italic lower case = 2'-aeoxy-2-fuoro underline = 2'-O-methyl ITALIC UPPER CASE = DEOXY
B = ABASIC, INVERTED ABASIC, INVERTED NUCLEOTIDE
OR OTHER TERMINAL CAP THAT IS OPTIONALLY PRESENT
L = GLYCERYL MOIETY or IB OPTIONALLY PRESENT

S = PHOSPHOROTHIOATE OR PHOSPHORODITHIOATE OPTIONALLY PRESENT WO 2005/044981

ANTISENSE

Figure 6



ANTISENSE RNAi SENSE

ANTISENSE

SENSE

SENSE

SENSE () " ENAi

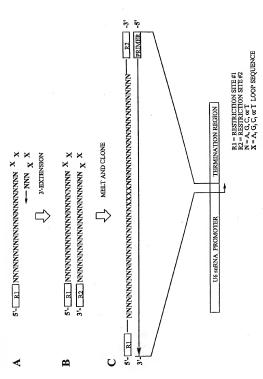
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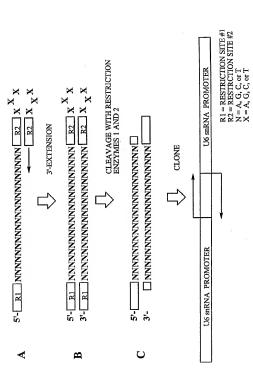
ANTISENSE

n=0, 1, 2, 3, 4

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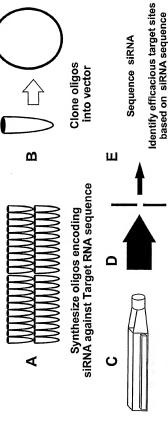
## Figure 7





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Figure 9: Target site Selection using siRNA



Select cells exhibiting desired phenotype

Transduce target cells

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R = O, S, N, alkyl, substituted alkyl, O-alkyl, S-alkyl, alkaryl, or aralkyl B = Independently any nucleotide base, either naturally occurring or chemically modified, or optionally H (abasic).

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Figure 11: Modification Strategy

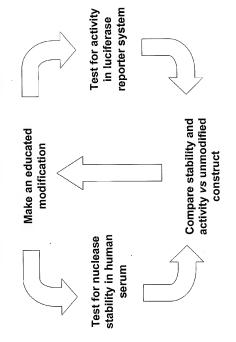
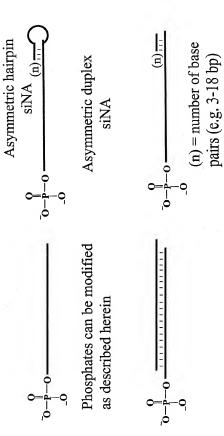


Figure 12: Phosphorylated siNA constructs



modifications herein

Figure 13: 5'-phosphate modifications

Figure 14A: Duplex forming oligonucleotide constructs that utilize Palindrome or repeat sequences

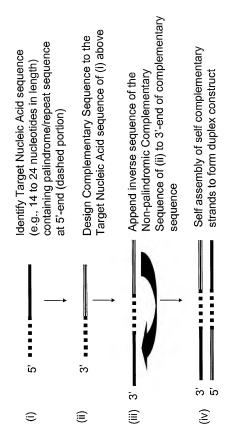


Figure 14B: Example of a duplex forming oligonucleotide sequence that utilizes a palindrome or repeat sequence

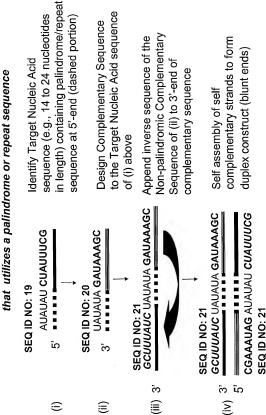
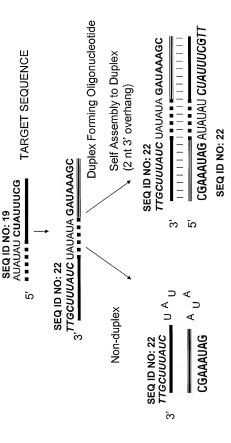


Figure 14C: Example of a duplex forming oligonucleotide sequence that utilizes a palindrome or repeat sequence, self assembly



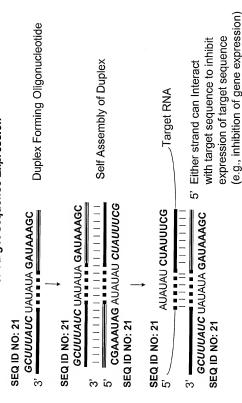


Figure 15: Duplex forming oligonucleotide constructs that utilize artificial palindrome or repeat sequences

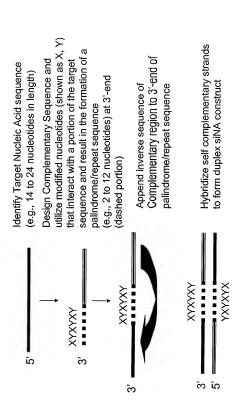


Figure 16: Examples of double stranded multifunctional siNA

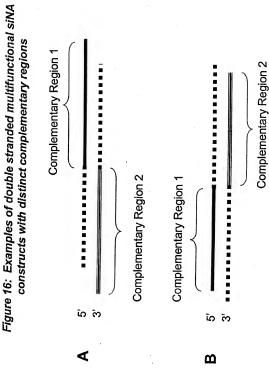


Figure 17: Examples of hairpin multifunctional siNA constructs with distinct complementary regions

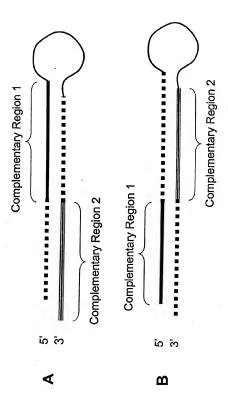


Figure 18: Examples of double stranded multifunctional siNA constructs with

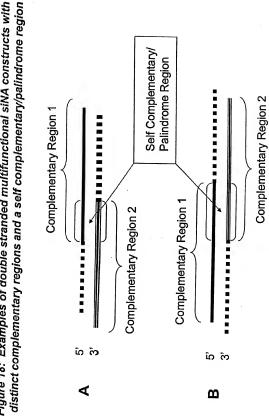
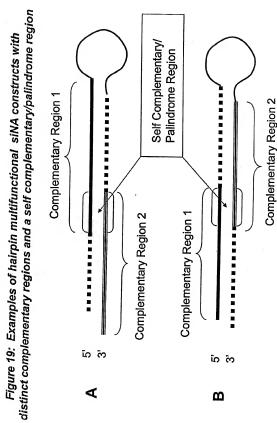


Figure 19: Examples of hairpin multifunctional siNA constructs with



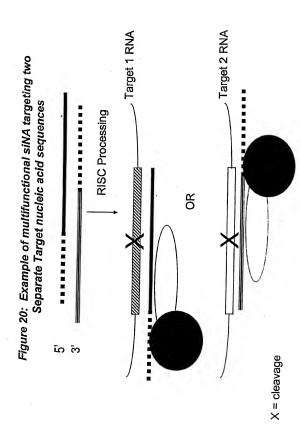


Figure 21: Example of multifunctional siNA targeting two regions

